

**AD-A252 121**



**92-16483**



## **TASK ANALYSIS**

This document (Volume II of the training requirements analysis) includes the task analysis data for the F-111 Avionics Test Station and Component Specialty (AFSC 451X6). This analysis encompasses tasks from the AFSC 451X6 USAF Job Inventory as well as additional tasks identified during interviews.

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Copies of this document and the training requirements analysis (Volume I) are available upon request to the USAF Occupational Measurement Squadron, Attention: Chief, Airman Analysis Section (OMYO), Randolph AFB, TX 78150-5000 or Det 5 USAFOMS, Lowry AFB, CO 80230-5000.

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|                    |                                     |
|--------------------|-------------------------------------|
| Accession For      |                                     |
| NTIS GRA&I         | <input checked="" type="checkbox"/> |
| DTIC TAB           | <input type="checkbox"/>            |
| Unannounced        | <input type="checkbox"/>            |
| Justification      |                                     |
| By                 |                                     |
| Distribution/      |                                     |
| Availability Codes |                                     |
| Dist               | Avail and/or<br>Special             |
| A-1                |                                     |

## **TASK ANALYSIS DATA ELEMENTS**

The following provides an explanation of the data elements contained in the task analysis:

**TASK NUMBER:** Training Requirements Analysis (TRA) task number.

**TASK STATEMENT:** The task to be performed.

**TASK NOTES:** Contains brief comments or explanations to enhance understanding of the task statement.

**TRAINING RECOMMENDATIONS:** Provides a training recommendation at the major task level. Specific training recommendations are found in Volume I in the proposed STS. Many recommendations may appear unjustified due to the small percentages performing as identified in the occupational survey report. Changes in the equipment and job requirements, such as increased usage of AIS/R test stations, have occurred since the survey was accomplished that make these recommendations valid.

**EQUIPMENT, TOOLS, SUPPLIES:** Equipment, tools, supplies, etc., required to perform the task.

**REFERENCES:** Lists the TOs, AFOSH Standards, Regulations, and any other references required to perform the task.

**CONDITIONS:** Environment in which a task is performed. Includes consideration of the actual physical environment. A condition for all tasks is "In a secured area." If no condition is listed, it is understood that this is the only condition for that task.

**CUES:** Actions or directives that initiate, signal, or prompt the performance of the task.

**STANDARDS:** Specifies the job performance evaluation standards for performing the task accurately and expediently.

**ACTIVITIES:** Significant steps required to perform the task.

**SKILLS:** Skills involve physical or manipulative activities often requiring knowledge and special requirements for speed, accuracy, or coordination for task execution.

**KNOWLEDGE:** Knowledge, not directly observable, involves the use of mental process enabling recall of facts, identification of concepts, application of rules or principles, solving of problems, or creative thinking, etc.

**RELATED OCCUPATIONAL SURVEY DATA:** Occupational survey data is used with the Training Decisions Logic Table (ATCR 52-22, Occupational Analysis Program, Attachment 1) to determine where tasks should be trained and to what level. The following explains the data columns listed within this report.

| AFSC | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI  |
|------|---------------|------------|------------|------------|----------|----------|------------|--|
| :    | :             | :          | :          | :          | :        | :        | :          | :  |
| :    | :             | :          | :          | :          | :        | :        | :          | Automated                                    |
| :    | :             | :          | :          | :          | :        | :        | :          | Training                                     |
| :    | :             | :          | :          | :          | :        | :        | :          | Indicator                                    |
| :    | :             | :          | :          | :          | :        | :        | :          | (Not available                               |
| :    | :             | :          | :          | :          | :        | :        | :          | for this AFSC)                               |
| :    | :             | :          | :          | :          | :        | :        | :          | Task Difficulty Rating                       |
| :    | :             | :          | :          | :          | :        | :        | :          | (4.00-6.00 = average                         |
| :    | :             | :          | :          | :          | :        | :        | :          | difficulty)                                  |
| :    | :             | :          | :          | :          | :        | :        | :          | Percentage of 7-skill level                  |
| :    | :             | :          | :          | :          | :        | :        | :          | survey respondents who                       |
| :    | :             | :          | :          | :          | :        | :        | :          | perform the task                             |
| :    | :             | :          | :          | :          | :        | :        | :          | Percentage of 5-skill level                  |
| :    | :             | :          | :          | :          | :        | :        | :          | survey respondents who perform               |
| :    | :             | :          | :          | :          | :        | :        | :          | the task                                     |
| :    | :             | :          | :          | :          | :        | :        | :          | Percentage of 1- to 48-month survey          |
| :    | :             | :          | :          | :          | :        | :        | :          | respondents who perform the task             |
| :    | :             | :          | :          | :          | :        | :        | :          | Percentage of 1- to 24-month survey          |
| :    | :             | :          | :          | :          | :        | :        | :          | respondents who perform the task             |
| :    | :             | :          | :          | :          | :        | :        | :          | Training Emphasis Rating                     |
| :    | :             | :          | :          | :          | :        | :        | :          | (Not available for this AFSC)                |
| :    | :             | :          | :          | :          | :        | :        | :          | USAF Job Inventory duty code and task number |

Identifies shredded data by alpha suffix (No suffix indicates data is representative of entire AFSC)

**USAF JOB INVENTORY TASK STATEMENTS:** A listing of job inventory statements applicable to the task. Some job inventory tasks are related to TRA tasks, but they cannot be classified as activity, skill, or knowledge behaviors. These are normally equipment specific statements and are included because they will provide additional information about the task.

## ADDITIONAL INFORMATION ON TASK ANALYSIS

The majority of the tasks analyzed were broad areas that covered many different pieces of equipment. (For a detailed listing of all equipment covered by each task, refer to Appendix A.) To ensure complete coverage, every possible piece of equipment, tool, supply, activity, skill, and knowledge is listed. As a result, every item may not be applicable to the specific task being performed. An example would be an isolating malfunction task. The steps a technician takes, the knowledge and skills required, and the equipment used, depend upon the particular malfunction encountered. What each analysis has tried to show is every conceivable possibility. The approach just described pertains to the majority of tasks within this analysis -- not just isolating malfunctions.

Usually, the only items listed in the "Equipment, Tools, and Supplies" section are those which are not supplied with the test station. Cables, test packages, holding fixtures, adapters, test equipment, etc., are not listed since they are supplied with the station. If an oscilloscope, multimeter, adapter, etc., is listed, it is referring to a piece of equipment not usually in the station. The only exception is when subject matter experts (SMEs) felt a supplied item required specialized knowledge or skills. In this case, the equipment was listed even though it is technically a part of the test station.

Throughout the analysis the skill of "Use common handtools" appears. These tools are those commonly found in a consolidated tool kit (CTK) that require no special or unique skills or knowledge to use. A list of the tools considered to be common is located in Appendix C.

The analysis uses the knowledge "Annotate Forms" to show the need for forms documentation. There are many diverse forms used in this Air Force specialty and to preclude listing each form in every task, the generic knowledge was used. A list of forms, derived from the job inventory, is given in Appendix D.

Although a piece of equipment is maintained from the first test through the final repair action, "maintaining" is too large to analyze. To effectively analyze all aspects of maintaining a piece of equipment, we divided it into smaller tasks, i.e., test, isolate malfunctions, and repair. An exception to this is when after analysis, the skills and knowledge required to perform the smaller tasks were similar. In this case, the smaller tasks were combined back into a "Maintain" task.

When a TRA task is used as an activity, skill, or knowledge it will be identified as "(Task Number: 6XXXX)." All requirements for the referenced task are also requirements for the task being performed. This approach was taken to eliminate some of the duplication in the analysis.

Some statements in the activities, skills, and knowledge area have a letter and number, i.e., F 210, in parenthesis at the end of the statement. This shows that the statement came directly from the job inventory and links the statement with the applicable occupational survey data. If no reference is present, the statement was derived during interviews with specialty SMEs.

Many times throughout the document there are data under the 'RELATED OCCUPATIONAL SURVEY DATA' and the 'USAF JOB INVENTORY TASK STATEMENTS' areas that are not referenced in the analysis. These items are related to the task being analyzed but are subsumed under the TRA task statement or a broader activity, skill, or knowledge.

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**'A' SHRED TASKS**

**TASK NUMBER:** 60010

**TASK STATEMENT:**

PERFORM CONFIDENCE TESTS OF AUTOMATIC TEST STATIONS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR; TEST STATION  
VERIFICATION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CALL UP TAPE

A EXECUTE CONFIDENCE TEST

**SKILLS:**

S CONNECT ADAPTERS AND CABLES

S OPERATE TEST STATION

S USE OSCILLOSCOPE TO MEASURE PULSE CHARACTERISTICS

**KNOWLEDGE:**

K ANNOTATE FORMS

K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS

K APPLY SHOP SAFETY PROCEDURES

K APPLY TECHNICAL DATA

K DETERMINE WHICH PART OF CONFIDENCE TO EXECUTE

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | K 473         |            | 3          | 4          | 5        | 1        | 5.07       |     |
| 451X6B | K 473         |            | 0          | 1          | 1        | 1        | 5.07       |     |
| 451X6  | K 473         |            | 2          | 3          | 3        | 1        | 5.07       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | L 486         |            | 5          | 6          | 5        | 2        | 4.85       |     |
| 451X6B | L 486         |            | 0          | 0          | 0        | 2        | 4.85       |     |
| 451X6  | L 486         |            | 3          | 3          | 3        | 2        | 4.85       |     |
| 451X6A | L 487         |            | 0          | 8          | 8        | 1        | 4.93       |     |
| 451X6B | L 487         |            | 0          | 0          | 0        | 1        | 4.93       |     |
| 451X6  | L 487         |            | 0          | 4          | 4        | 1        | 4.93       |     |
| 451X6A | L 488         |            | 5          | 4          | 5        | 3        | 4.62       |     |
| 451X6B | L 488         |            | 0          | 0          | 0        | 3        | 4.62       |     |
| 451X6  | L 488         |            | 3          | 2          | 3        | 3        | 4.62       |     |
| 451X6A | M 505         |            | 11         | 10         | 7        | 1        | 4.35       |     |
| 451X6B | M 505         |            | 0          | 0          | 1        | 1        | 4.35       |     |
| 451X6  | M 505         |            | 6          | 5          | 4        | 1        | 4.35       |     |
| 451X6A | M 506         |            | 3          | 2          | 4        | 1        | 4.39       |     |
| 451X6B | M 506         |            | 0          | 0          | 0        | 1        | 4.39       |     |
| 451X6  | M 506         |            | 2          | 1          | 2        | 1        | 4.39       |     |
| 451X6A | M 507         |            | 5          | 3          | 2        | 1        | 4.35       |     |
| 451X6B | M 507         |            | 0          | 0          | 0        | 1        | 4.35       |     |
| 451X6  | M 507         |            | 3          | 2          | 1        | 1        | 4.35       |     |
| 451X6A | N 541         |            | 3          | 2          | 1        | 0        | 4.71       |     |
| 451X6B | N 541         |            | 0          | 0          | 0        | 0        | 4.71       |     |
| 451X6  | N 541         |            | 2          | 1          | 1        | 0        | 4.71       |     |
| 451X6A | N 542         |            | 8          | 9          | 8        | 0        | 4.50       |     |
| 451X6B | N 542         |            | 0          | 0          | 0        | 0        | 4.50       |     |
| 451X6  | N 542         |            | 5          | 5          | 4        | 0        | 4.50       |     |
| 451X6A | N 543         |            | 5          | 4          | 4        | 2        | 4.53       |     |
| 451X6B | N 543         |            | 0          | 0          | 0        | 2        | 4.53       |     |
| 451X6  | N 543         |            | 3          | 2          | 2        | 2        | 4.53       |     |
| 451X6A | N 544         |            | 5          | 6          | 6        | 2        | 4.45       |     |
| 451X6B | N 544         |            | 0          | 0          | 0        | 2        | 4.45       |     |
| 451X6  | N 544         |            | 3          | 3          | 3        | 2        | 4.45       |     |
| 451X6A | P 578         |            | 5          | 8          | 10       | 1        | 4.55       |     |
| 451X6B | P 578         |            | 0          | 0          | 0        | 1        | 4.55       |     |
| 451X6  | P 578         |            | 3          | 4          | 5        | 1        | 4.55       |     |
| 451X6A | P 579         |            | 3          | 3          | 4        | 1        | 4.77       |     |
| 451X6B | P 579         |            | 0          | 0          | 0        | 1        | 4.77       |     |
| 451X6  | P 579         |            | 2          | 2          | 2        | 1        | 4.77       |     |

# RELATED OCCUPATIONAL SURVEY DATA:

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | P 580         |            | 0          | 3          | 6        | 1        | 5.16       |     |
| 451X6B | P 580         |            | 0          | 0          | 0        | 1        | 5.16       |     |
| 451X6  | P 580         |            | 0          | 2          | 3        | 1        | 5.16       |     |
| 451X6A | Q 593         |            | 0          | 2          | 2        | 1        | 4.73       |     |
| 451X6B | Q 593         |            | 0          | 0          | 0        | 1        | 4.73       |     |
| 451X6  | Q 593         |            | 0          | 1          | 1        | 1        | 4.73       |     |
| 451X6A | Q 594         |            | 5          | 4          | 6        | 1        | 4.32       |     |
| 451X6B | Q 594         |            | 0          | 0          | 0        | 1        | 4.32       |     |
| 451X6  | Q 594         |            | 3          | 2          | 4        | 1        | 4.32       |     |
| 451X6A | R 605         |            | 8          | 9          | 10       | 4        | 4.59       |     |
| 451X6B | R 605         |            | 0          | 0          | 0        | 4        | 4.59       |     |
| 451X6  | R 605         |            | 5          | 5          | 5        | 4        | 4.59       |     |
| 451X6A | T 858         |            | 3          | 2          | 2        | 0        | 5.08       |     |
| 451X6B | T 858         |            | 0          | 0          | 0        | 0        | 5.08       |     |
| 451X6  | T 858         |            | 2          | 1          | 1        | 0        | 5.08       |     |

# USAF JOB INVENTORY TASK STATEMENTS:

K 473 PERFORM CONFIDENCE TESTS OF ATTITUDE AND RATE TEST STATIONS

L 486 PERFORM CONFIDENCE TESTS OF ELECTRONIC SYSTEMS TEST STATIONS

L 487 PERFORM CONFIDENCE TESTS OF INDICATORS AND MODULES TEST STATIONS

L 488 PERFORM CONFIDENCE TESTS OF INDICATORS AND SENSORS TEST STATIONS

M 505 PERFORM CONFIDENCE TESTS OF COMPUTER (6803) TEST STATIONS

M 506 PERFORM CONFIDENCE TESTS OF CONVERTER AND FLIGHT CONTROLS TEST STATIONS

M 507 PERFORM CONFIDENCE TESTS OF NAVIGATION AND FLIGHT CONTROLS TEST STATIONS

N 541 PERFORM CONFIDENCE TESTS OF RADAR ALTIMETER (6836) TEST STATIONS

N 542 PERFORM CONFIDENCE TESTS OF VIDEO (6815) TEST STATIONS

N 543 PERFORM CONFIDENCE TESTS OF VIDEO (6875) TEST STATIONS

N 544 PERFORM CONFIDENCE TESTS OF VIDEO (6885) TEST STATIONS

P 578 PERFORM CONFIDENCE TESTS OF RECEIVER-TRANSMITTER-MODULATOR (6802) TEST STATIONS

P 579 PERFORM CONFIDENCE TESTS OF RECEIVER-TRANSMITTER-MODULATOR (6872) TEST STATIONS

P 580 PERFORM CONFIDENCE TESTS OF RECEIVER-TRANSMITTER-MODULATOR (6882) TEST STATIONS

Q 593 PERFORM CONFIDENCE TESTS OF INDICATORS AND SERVOS (6895) TEST STATIONS

**USAF JOB INVENTORY TASK STATEMENTS:**

**Q 594 PERFORM CONFIDENCE TESTS OF SERVOS AND INDICATORS (6825)  
TEST STATIONS**

**R 605 PERFORM CONFIDENCE TESTS OF DIGITAL NAVIGATION AND WEAPONS  
DELIVERY (6863) TEST STATIONS**

**T 858 PERFORM CONFIDENCE TESTS OF DISPLAYS TEST STATIONS**

**TASK NUMBER:** 60020

**TASK STATEMENT:**

PERFORM MAINTENANCE TESTS OF AUTOMATIC TEST STATIONS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

DECADE RESISTOR BOX

SYNCHRO BRIDGE

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR; EVERY 180 DAYS

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CALL UP TAPE

A EXECUTE MAINTENANCE TEST

**SKILLS:**

S CONNECT ADAPTERS AND CABLES

S OPERATE TEST STATION

S USE DECADE RESISTER BOX

S USE SYNCHRO BRIDGE

**KNOWLEDGE:**

K ANNOTATE FORMS

K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS

K APPLY SHOP SAFETY PROCEDURES

K APPLY TECHNICAL DATA

K DETERMINE WHICH PART OF MAINTENANCE TO EXECUTE

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 244         |            | 47         | 66         | 72       | 38       | 5.10       |     |
| 451X6B | F 244         |            | 42         | 48         | 54       | 38       | 5.10       |     |
| 451X6  | F 244         |            | 45         | 56         | 64       | 38       | 5.10       |     |
| 451X6A | K 474         |            | 3          | 3          | 4        | 1        | 5.15       |     |
| 451X6B | K 474         |            | 0          | 1          | 0        | 1        | 5.15       |     |
| 451X6  | K 474         |            | 2          | 2          | 2        | 1        | 5.15       |     |
| 451X6A | L 489         |            | 5          | 4          | 4        | 2        | 4.98       |     |
| 451X6B | L 489         |            | 0          | 0          | 0        | 2        | 4.98       |     |
| 451X6  | L 489         |            | 3          | 2          | 2        | 2        | 4.98       |     |
| 451X6A | L 490         |            | 0          | 8          | 8        | 2        | 5.14       |     |
| 451X6B | L 490         |            | 0          | 0          | 0        | 2        | 5.14       |     |
| 451X6  | L 490         |            | 0          | 4          | 4        | 2        | 5.14       |     |
| 451X6A | L 491         |            | 5          | 4          | 5        | 2        | 5.15       |     |
| 451X6B | L 491         |            | 0          | 0          | 0        | 2        | 5.15       |     |
| 451X6  | L 491         |            | 3          | 2          | 3        | 2        | 5.15       |     |
| 451X6A | M 508         |            | 11         | 10         | 8        | 1        | 4.88       |     |
| 451X6B | M 508         |            | 0          | 0          | 1        | 1        | 4.88       |     |
| 451X6  | M 508         |            | 6          | 5          | 4        | 1        | 4.88       |     |
| 451X6A | M 509         |            | 3          | 3          | 4        | 1        | 4.88       |     |
| 451X6B | M 509         |            | 0          | 0          | 0        | 1        | 4.88       |     |
| 451X6  | M 509         |            | 2          | 2          | 2        | 1        | 4.88       |     |
| 451X6A | M 510         |            | 5          | 3          | 2        | 1        | 4.89       |     |
| 451X6B | M 510         |            | 0          | 0          | 0        | 1        | 4.89       |     |
| 451X6  | M 510         |            | 3          | 2          | 1        | 1        | 4.89       |     |
| 451X6A | N 545         |            | 0          | 2          | 1        | 1        | 4.54       |     |
| 451X6B | N 545         |            | 0          | 0          | 0        | 1        | 4.54       |     |
| 451X6  | N 545         |            | 0          | 1          | 0        | 1        | 4.54       |     |
| 451X6A | N 546         |            | 5          | 8          | 9        | 1        | 5.24       |     |
| 451X6B | N 546         |            | 0          | 1          | 0        | 1        | 5.24       |     |
| 451X6  | N 546         |            | 3          | 5          | 5        | 1        | 5.24       |     |
| 451X6A | N 547         |            | 5          | 6          | 6        | 2        | 5.44       |     |
| 451X6B | N 547         |            | 0          | 0          | 0        | 2        | 5.44       |     |
| 451X6  | N 547         |            | 3          | 3          | 3        | 2        | 5.44       |     |
| 451X6A | N 548         |            | 8          | 8          | 7        | 2        | 5.43       |     |
| 451X6B | N 548         |            | 0          | 0          | 0        | 2        | 5.43       |     |
| 451X6  | N 548         |            | 5          | 4          | 4        | 2        | 5.43       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | P 581         |            | 8          | 8          | 9        | 1        | 5.36       |     |
| 451X6B | P 581         |            | 0          | 0          | 0        | 1        | 5.36       |     |
| 451X6  | P 581         |            | 5          | 4          | 5        | 1        | 5.36       |     |
| 451X6A | P 582         |            | 3          | 3          | 3        | 2        | 5.28       |     |
| 451X6B | P 582         |            | 0          | 0          | 0        | 2        | 5.28       |     |
| 451X6  | P 582         |            | 2          | 2          | 2        | 2        | 5.28       |     |
| 451X6A | P 583         |            | 0          | 3          | 6        | 2        | 5.52       |     |
| 451X6B | P 583         |            | 0          | 0          | 0        | 2        | 5.52       |     |
| 451X6  | P 583         |            | 0          | 2          | 3        | 2        | 5.52       |     |
| 451X6A | Q 595         |            | 0          | 2          | 2        | 1        | 5.42       |     |
| 451X6B | Q 595         |            | 0          | 0          | 0        | 1        | 5.42       |     |
| 451X6  | Q 595         |            | 0          | 1          | 1        | 1        | 5.42       |     |
| 451X6A | Q 596         |            | 5          | 4          | 7        | 1        | 5.57       |     |
| 451X6B | Q 596         |            | 0          | 0          | 0        | 1        | 5.57       |     |
| 451X6  | Q 596         |            | 3          | 2          | 4        | 1        | 5.57       |     |
| 451X6A | R 606         |            | 8          | 9          | 10       | 4        | 5.23       |     |
| 451X6B | R 606         |            | 0          | 0          | 0        | 4        | 5.23       |     |
| 451X6  | R 606         |            | 5          | 5          | 5        | 4        | 5.23       |     |
| 451X6A | T 859         |            | 0          | 0          | 1        | 0        | 5.43       |     |
| 451X6B | T 859         |            | 0          | 0          | 0        | 0        | 5.43       |     |
| 451X6  | T 859         |            | 0          | 0          | 1        | 0        | 5.43       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 244 PERFORM MAINTENANCE TAPE TESTS OF TEST STATIONS  
 K 474 PERFORM OA/FI TESTS OF ATTITUDE AND RATE TEST STATIONS  
 L 489 PERFORM MAINTENANCE TESTS OF ELECTRONIC SYSTEMS TEST STATIONS  
 L 490 PERFORM MAINTENANCE TESTS OF INDICATORS AND MODULES TEST STATIONS  
 L 491 PERFORM MAINTENANCE TESTS OF INDICATORS AND SENSORS TEST STATIONS  
 M 508 PERFORM MAINTENANCE TESTS OF COMPUTER (6803) TEST STATIONS  
 M 509 PERFORM MAINTENANCE TESTS OF CONVERTER AND FLIGHT CONTROLS TEST STATIONS  
 M 510 PERFORM MAINTENANCE TESTS OF NAVIGATION AND FLIGHT CONTROLS TEST STATIONS  
 N 545 PERFORM MAINTENANCE TESTS OF RADAR ALTIMETER (6836) TEST STATIONS  
 N 546 PERFORM MAINTENANCE TESTS OF VIDEO (6815) TEST STATIONS  
 N 547 PERFORM MAINTENANCE TESTS OF VIDEO (6875) TEST STATIONS  
 N 548 PERFORM MAINTENANCE TESTS OF VIDEO (6885) TEST STATIONS  
 P 581 PERFORM MAINTENANCE TESTS OF RECEIVER-TRANSMITTER-MODULATOR (6802) TEST STATIONS

**USAF JOB INVENTORY TASK STATEMENTS:**

P 582 PERFORM MAINTENANCE TESTS OF RECEIVER-TRANSMITTER-MODULATOR  
(6872) TEST STATIONS

P 583 PERFORM MAINTENANCE TESTS OF RECEIVER-TRANSMITTER-MODULATOR  
(6882) TEST STATIONS

Q 595 PERFORM MAINTENANCE TESTS OF INDICATORS AND SERVOS (6895)  
TEST STATIONS

Q 596 PERFORM MAINTENANCE TESTS OF SERVOS AND INDICATORS (6825)  
TEST STATIONS

R 606 PERFORM MAINTENANCE TESTS OF DIGITAL NAVIGATION AND WEAPONS  
DELIVER (6863) TEST STATIONS

T 859 PERFORM MAINTENANCE TESTS OF DISPLAYS TEST STATIONS

**TASK NUMBER:** 60030

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN AUTOMATIC TEST STATIONS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

AUDIO OSCILLATOR  
CAPACITANCE TEST SET  
CAPACITOR SUBSTITUTION BOX  
CTK  
DIGITAL LOGIC PROBE  
DISTORTION ANALYZER  
EXTENDER BOARDS  
FREQUENCY COUNTER  
ISOLATOR  
LOGIC PROBE  
MULTIMETER  
OSCILLOSCOPE  
PHOTOMETER  
SOLDERING STATION  
SPECTRUM ANALYZER  
SYNCHRO BRIDGE  
TDR

**REFERENCES:**

APPLICABLE SHOP SYSTEMS TO  
APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

- A PERFORM CONFIDENCE TEST OF AUTOMATIC TEST STATIONS  
(TASK NUMBER: 60010)
- A PERFORM MAINTENANCE TEST OF AUTOMATIC TEST STATIONS  
(TASK NUMBER: 60020)

## SKILLS:

- S CONNECT ADAPTER AND CABLES
- S INSTALL EXTENDER BOARDS
- S OPERATE TEST STATION
- S PERFORM VISUAL INSPECTIONS
- S SOLDER OR DESOLDER TERMINAL CONNECTIONS
- S USE AUDIO OSCILLATOR TO PRODUCE FREQUENCY
- S USE CAPACITANCE TEST SET TO MEASURE CAPACITANCE
- S USE CAPACITOR SUBSTITUTION BOX TO MEASURE CAPACITOR INPUT/OUTPUT
- S USE COMMON HANDTOOLS
- S USE DIGITAL LOGIC PROBE
- S USE DISTORTION ANALYZER TO OPERATIONALLY CHECK INTERCOM CONTROL BOX
- S USE FREQUENCY COUNTER
- S USE ISOLATOR
- S USE LOGIC PROBE TO TROUBLESHOOT LOGIC BOARD
- S USE MULTIMETER TO CHECK CONTINUITY AND VOLTAGES
- S USE OSCILLOSCOPE TO MEASURE VOLTAGES AND PULSE CHARACTERISTICS
- S USE PHOTOMETER
- S USE SOLDERING STATION
- S USE SPECTRUM ANALYZER
- S USE SYNCHRO BRIDGE
- S USE TDR

## KNOWLEDGE:

- K ANNOTATE FORMS
- K APPLY AC CIRCUIT THEORY OF OPERATION
- K APPLY AC GENERATOR THEORY OF OPERATION
- K APPLY AM MODULATION TRANSMITTER THEORY OF OPERATION
- K APPLY AM RECEIVER THEORY OF OPERATION
- K APPLY APPROXIMATION A/D CONVERTER THEORY OF OPERATION
- K APPLY BIPOLAR JUNCTION TRANSISTOR THEORY OF OPERATION
- K APPLY CAPACITOR THEORY OF OPERATION
- K APPLY COMBINATIONAL LOGIC CIRCUIT THEORY OF OPERATION
- K APPLY DC CIRCUIT THEORY OF OPERATION
- K APPLY DC GENERATOR THEORY OF OPERATION
- K APPLY FLIP-FLOP THEORY OF OPERATION
- K APPLY FM RECEIVER THEORY OF OPERATION
- K APPLY FM TRANSMITTER THEORY OF OPERATION
- K APPLY FREQUENCY SENSITIVE FILTER THEORY OF OPERATION
- K APPLY INDUCTOR THEORY OF OPERATION
- K APPLY INTEGRATED CIRCUIT THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT ZENER DIODE THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT COUNTER THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT REGISTER THEORY OF OPERATION
- K APPLY MAIN LOGIC GATE THEORY OF OPERATION
- K APPLY OPERATIONAL AMPLIFIER THEORY OF OPERATION
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY OSCILLATOR CIRCUIT THEORY OF OPERATION

## KNOWLEDGE:

K APPLY POWER SUPPLY FILTER THEORY OF OPERATION  
K APPLY POWER SUPPLY RECTIFIER THEORY OF OPERATION  
K APPLY POWER SUPPLY THEORY OF OPERATION  
K APPLY PULSE MODULATION RECEIVER THEORY OF OPERATION  
K APPLY PULSE MODULATION TRANSMITTER THEORY OF OPERATION  
K APPLY RCL CIRCUIT THEORY OF BASIC OPERATION  
K APPLY RCL CIRCUIT THEORY OF RESONANT OPERATION  
K APPLY RELAY THEORY OF OPERATION  
K APPLY RESISTOR THEORY OF OPERATION  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY SINGLE SIDEBAND RECEIVER THEORY OF OPERATION  
K APPLY SINGLE SIDEBAND TRANSMITTER THEORY OF OPERATION  
K APPLY SOLID STATE DIODE THEORY OF OPERATION  
K APPLY SYNCHRO-SERVO THEORY OF OPERATION  
K APPLY TECHNICAL DATA  
K APPLY THREE-PHASE TRANSFORMER THEORY OF OPERATION  
K APPLY TRANSFORMER THEORY OF OPERATION  
K APPLY TRANSISTOR AMPLIFIER CIRCUIT THEORY OF OPERATION  
K APPLY TUNNEL DIODE THEORY OF OPERATION  
K APPLY VOLTAGE REGULATOR THEORY OF OPERATION  
K APPLY WAVEGUIDE THEORY OF OPERATION  
K APPLY WAVESHAPING CIRCUIT THEORY OF OPERATION  
K APPLY ZENER DIODE THEORY OF OPERATION  
K DECODE PROGRAM  
K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING  
K DETERMINE WHETHER MALFUNCTION IS IN TEST STATION, LRU, OR  
ADAPTER (TASK NUMBER: 61360)  
K ISOLATE FAULTY AC CIRCUITS  
K ISOLATE FAULTY AC GENERATORS  
K ISOLATE FAULTY AM RECEIVERS  
K ISOLATE FAULTY AM TRANSMITTERS  
K ISOLATE FAULTY APPROXIMATION A/D CONVERTERS  
K ISOLATE FAULTY BIPOLAR JUNCTION TRANSISTORS  
K ISOLATE FAULTY COMBINATIONAL LOGIC CIRCUITS  
K ISOLATE FAULTY DC CIRCUITS  
K ISOLATE FAULTY DC GENERATORS  
K ISOLATE FAULTY FLIP-FLOPS  
K ISOLATE FAULTY FM MODULATION TRANSMITTERS  
K ISOLATE FAULTY FM RECEIVERS  
K ISOLATE FAULTY FREQUENCY SENSITIVE FILTERS  
K ISOLATE FAULTY INDUCTORS  
K ISOLATE FAULTY INTEGRATED CIRCUITS  
K ISOLATE FAULTY LIMITER CIRCUIT DIODES  
K ISOLATE FAULTY LIMITER CIRCUIT ZENER DIODES  
K ISOLATE FAULTY LIMITER TRANSISTOR CIRCUITS  
K ISOLATE FAULTY LOGIC COUNTERS  
K ISOLATE FAULTY MAIN LOGIC GATES  
K ISOLATE FAULTY OPERATIONAL AMPLIFIERS  
K ISOLATE FAULTY OSCILLATOR CIRCUITS  
K ISOLATE FAULTY POWER SUPPLIES  
K ISOLATE FAULTY POWER SUPPLY FILTERS  
K ISOLATE FAULTY POWER SUPPLY RECTIFIERS  
K ISOLATE FAULTY PULSE MODULATION RECEIVERS

## KNOWLEDGE:

- K ISOLATE FAULTY PULSE MODULATION TRANSMITTERS
- K ISOLATE FAULTY REGISTER LOGIC CIRCUITS
- K ISOLATE FAULTY RELAYS
- K ISOLATE FAULTY RESISTORS
- K ISOLATE FAULTY SINGLE SIDEBAND RECEIVERS
- K ISOLATE FAULTY SINGLE SIDEBAND TRANSMITTERS
- K ISOLATE FAULTY SOLID STATE DIODES
- K ISOLATE FAULTY SYNCHROS-SERVOS
- K ISOLATE FAULTY THREE-PHASE TRANSFORMERS
- K ISOLATE FAULTY TRANSFORMERS
- K ISOLATE FAULTY TRANSISTOR AMPLIFIER CIRCUITS
- K ISOLATE FAULTY TUNNEL DIODES
- K ISOLATE FAULTY VOLTAGE REGULATORS
- K ISOLATE FAULTY WAVEGUIDES
- K ISOLATE FAULTY WAVESHAPING CIRCUITS
- K ISOLATE FAULTY ZENER DIODES
- K ISOLATE MALFUNCTIONS IN TEST STATION THROUGH INTERCONNECTS OF AN INSTALLED LRU (TASK NUMBER: 61370)
- K PERFORM BASIC DC CIRCUIT CALCULATIONS
- K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)
- K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)
- K TROUBLESHOOT AC CIRCUITS
- K TROUBLESHOOT AC GENERATORS
- K TROUBLESHOOT AM RECEIVER CIRCUITS
- K TROUBLESHOOT AM TRANSMITTERS
- K TROUBLESHOOT APPROXIMATION A/D CONVERTERS
- K TROUBLESHOOT BIPOLAR JUNCTION TRANSISTORS
- K TROUBLESHOOT COMBINATIONAL LOGIC CIRCUITS
- K TROUBLESHOOT DC CIRCUITS
- K TROUBLESHOOT DC GENERATORS
- K TROUBLESHOOT FLIP-FLOPS
- K TROUBLESHOOT FM MODULATION TRANSMITTERS
- K TROUBLESHOOT FM RECEIVER CIRCUITS
- K TROUBLESHOOT FREQUENCY SENSITIVE FILTERS
- K TROUBLESHOOT INDUCTORS
- K TROUBLESHOOT LIMITER CIRCUIT DIODES
- K TROUBLESHOOT LIMITER CIRCUIT TRANSISTORS
- K TROUBLESHOOT LIMITER CIRCUIT ZENER DIODES
- K TROUBLESHOOT LOGIC COUNTERS
- K TROUBLESHOOT LOGIC REGISTERS
- K TROUBLESHOOT MAIN LOGIC GATES
- K TROUBLESHOOT OPERATIONAL AMPLIFIERS
- K TROUBLESHOOT POWER SUPPLY CIRCUITS
- K TROUBLESHOOT POWER SUPPLY FILTERS
- K TROUBLESHOOT POWER SUPPLY RECTIFIERS
- K TROUBLESHOOT PULSE MODULATION RECEIVERS
- K TROUBLESHOOT PULSE MODULATION TRANSMITTERS
- K TROUBLESHOOT RELAYS
- K TROUBLESHOOT SINGLE SIDEBAND RECEIVERS
- K TROUBLESHOOT SINGLE SIDEBAND TRANSMITTERS
- K TROUBLESHOOT SYNCHROS-SERVOS
- K TROUBLESHOOT THREE-PHASE TRANSFORMERS

**KNOWLEDGE:**

K TROUBLESHOOT TRANSISTOR AMPLIFIER CIRCUITS  
 K TROUBLESHOOT VOLTAGE REGULATOR  
 K TROUBLESHOOT WAVE GENERATING CIRCUIT OSCILLATORS  
 K TROUBLESHOOT WAVESHAPING CIRCUITS  
 K USE COMPUTER PROGRAMMING LANGUAGE  
 K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
 K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | G 291         |            | 34         | 50         | 54       | 19       | 6.97       |     |
| 451X6B | G 291         |            | 0          | 11         | 9        | 19       | 6.97       |     |
| 451X6  | G 291         |            | 20         | 31         | 32       | 19       | 6.97       |     |
| 451X6A | G 292         |            | 39         | 57         | 58       | 22       | 6.82       |     |
| 451X6B | G 292         |            | 4          | 8          | 10       | 22       | 6.82       |     |
| 451X6  | G 292         |            | 25         | 33         | 35       | 22       | 6.82       |     |
| 451X6A | G 293         |            | 34         | 54         | 57       | 23       | 6.30       |     |
| 451X6B | G 293         |            | 0          | 9          | 15       | 23       | 6.30       |     |
| 451X6  | G 293         |            | 20         | 32         | 37       | 23       | 6.30       |     |
| 451X6A | G 294         |            | 37         | 54         | 57       | 22       | 6.34       |     |
| 451X6B | G 294         |            | 4          | 11         | 13       | 22       | 6.34       |     |
| 451X6  | G 294         |            | 23         | 33         | 36       | 22       | 6.34       |     |
| 451X6A | G 295         |            | 21         | 33         | 32       | 20       | 6.75       |     |
| 451X6B | G 295         |            | 8          | 15         | 16       | 20       | 6.75       |     |
| 451X6  | G 295         |            | 15         | 24         | 24       | 20       | 6.75       |     |
| 451X6A | G 296         |            | 8          | 14         | 19       | 17       | 7.27       |     |
| 451X6B | G 296         |            | 12         | 19         | 22       | 17       | 7.27       |     |
| 451X6  | G 296         |            | 9          | 16         | 20       | 17       | 7.27       |     |
| 451X6A | G 297         |            | 45         | 61         | 66       | 25       | 6.55       |     |
| 451X6B | G 297         |            | 12         | 14         | 15       | 25       | 6.55       |     |
| 451X6  | G 297         |            | 31         | 38         | 41       | 25       | 6.55       |     |
| 451X6A | G 298         |            | 45         | 63         | 66       | 27       | 6.34       |     |
| 451X6B | G 298         |            | 12         | 16         | 17       | 27       | 6.34       |     |
| 451X6  | G 298         |            | 31         | 40         | 42       | 27       | 6.34       |     |
| 451X6A | G 299         |            | 16         | 31         | 30       | 10       | 6.44       |     |
| 451X6B | G 299         |            | 0          | 1          | 1        | 10       | 6.44       |     |
| 451X6  | G 299         |            | 9          | 16         | 16       | 10       | 6.44       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | G 300         |            | 16         | 32         | 29       | 10       | 6.40       |     |
| 451X6B | G 300         |            | 0          | 1          | 1        | 10       | 6.40       |     |
| 451X6  | G 300         |            | 9          | 17         | 16       | 10       | 6.40       |     |
| 451X6A | G 301         |            | 42         | 59         | 64       | 24       | 6.46       |     |
| 451X6B | G 301         |            | 8          | 11         | 10       | 24       | 6.46       |     |
| 451X6  | G 301         |            | 28         | 35         | 38       | 24       | 6.46       |     |
| 451X6A | G 302         |            | 45         | 61         | 65       | 25       | 6.31       |     |
| 451X6B | G 302         |            | 8          | 14         | 13       | 25       | 6.31       |     |
| 451X6  | G 302         |            | 29         | 38         | 40       | 25       | 6.31       |     |
| 451X6A | G 303         |            | 24         | 37         | 34       | 10       | 6.40       |     |
| 451X6B | G 303         |            | 0          | 2          | 5        | 10       | 6.40       |     |
| 451X6  | G 303         |            | 14         | 20         | 20       | 10       | 6.40       |     |
| 451X6A | G 304         |            | 16         | 30         | 30       | 8        | 6.30       |     |
| 451X6B | G 304         |            | 0          | 1          | 1        | 8        | 6.30       |     |
| 451X6  | G 304         |            | 9          | 16         | 16       | 8        | 6.30       |     |
| 451X6A | G 305         |            | 18         | 32         | 29       | 7        | 6.03       |     |
| 451X6B | G 305         |            | 0          | 1          | 1        | 7        | 6.03       |     |
| 451X6  | G 305         |            | 11         | 17         | 16       | 7        | 6.03       |     |
| 451X6A | G 306         |            | 18         | 33         | 31       | 14       | 5.78       |     |
| 451X6B | G 306         |            | 4          | 7          | 9        | 14       | 5.78       |     |
| 451X6  | G 306         |            | 12         | 20         | 20       | 14       | 5.78       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES

G 291 ISOLATE MALFUNCTIONS IN BINARY DATA REGISTER-ROUTERS (DATAC) USING MAINTENANCE TAPE OR SCHEMATICS

G 292 ISOLATE MALFUNCTIONS IN COUNTER TIMERS USING MAINTENANCE TAPES OR SCHEMATICS

G 293 ISOLATE MALFUNCTIONS IN LOGIC POWER SUPPLIES USING MAINTENANCE TAPES OR SCHEMATICS

G 294 ISOLATE MALFUNCTIONS IN MICROLOGIC POWER SUPPLIES USING MAINTENANCE TAPES OR SCHEMATICS

G 295 ISOLATE MALFUNCTIONS IN PPGs USING FRONT PANEL CONTROLS, MAINTENANCE TAPES, OR SCHEMATICS

G 296 ISOLATE MALFUNCTIONS IN RF GENERATORS USING MAINTENANCE TAPES OR SCHEMATICS

G 297 ISOLATE MALFUNCTIONS IN STIMULUS CONTROLLERS USING MAINTENANCE TAPES, MANUAL PROGRAMMING, OR SCHEMATICS

G 298 ISOLATE MALFUNCTIONS IN STIMULUS RELAYS USING MAINTENANCE TAPES, MANUAL PROGRAMMING, OR SCHEMATICS

G 299 ISOLATE MALFUNCTIONS IN SYNCHRO BRIDGES USING MAINTENANCE TAPES, MANUAL PROGRAMMING, OR SCHEMATICS

**USAF JOB INVENTORY TASK STATEMENTS:**

- G 300 ISOLATE MALFUNCTIONS IN SYNCHRO STANDARDS USING MAINTENANCE TAPES, MANUAL PROGRAMMING, OR SCHEMATICS
- G 301 ISOLATE MALFUNCTIONS IN TEST POINT CONTROLLERS USING MANUAL PROGRAMMING, MAINTENANCE TAPES, OR SCHEMATICS
- G 302 ISOLATE MALFUNCTIONS IN TEST POINT RELAYS USING MANUAL PROGRAMMING, MAINTENANCE TAPES, OR SCHEMATICS
- G 303 ISOLATE MALFUNCTIONS IN TRANSFORMER/CONVERTERS USING MANUAL PROGRAMMING, MAINTENANCE TAPES, OR SCHEMATICS
- G 304 ISOLATE MALFUNCTIONS IN TRYGON POWER SUPPLIES
- G 305 ISOLATE MALFUNCTIONS IN TRYGON POWER SUPPLY CONTROLLERS
- G 306 ISOLATE MALFUNCTIONS IN VARIABLE POWER SUPPLY CONTROLS USING SCHEMATICS

**TASK NUMBER:** 60040

**TASK STATEMENT:**

REPAIR AUTOMATIC TEST STATIONS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES  
CTK  
DIGITAL MULTIMETER  
ESD PROTECTIVE EQUIPMENT  
FREQUENCY COUNTER  
OSCILLOSCOPE

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN TEST STATION  
A CLEAN CONTACTS (F 210)  
A EXECUTE TEST STATION PROGRAM (CALIBRATION OR OA/FI)  
A ORDER PARTS  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)  
A REMOVE AND REPLACE TRUs (TASK NUMBER: 61380)  
A REPAIR CIRCUIT CARDS AND CORDWOOD MODULES  
A REPAIR WIRING (TASK NUMBER: 61440)  
A RESEAT SRUs  
A TUNE OR ADJUST MICROWAVE OSCILLATORS OR AMPLIFIERS

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTION  
S USE COMMON HANDTOOLS

**SKILLS:**

S USE DIGITAL MULTIMETER TO CHECK VOLTAGE  
 S USE FREQUENCY COUNTER TO MEASURE PULSES PER SECOND  
 S USE OSCILLOSCOPE TO CHECK WAVEFORM

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY ESD PRECAUTIONS  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | G 282         |            | 37         | 42         | 44       | 18       | 5.38       |     |
| 451X6B | G 282         |            | 0          | 9          | 10       | 18       | 5.38       |     |
| 451X6  | G 282         |            | 22         | 26         | 28       | 18       | 5.38       |     |
| 451X6A | G 283         |            | 42         | 54         | 57       | 21       | 4.85       |     |
| 451X6B | G 283         |            | 8          | 15         | 16       | 21       | 4.85       |     |
| 451X6  | G 283         |            | 28         | 35         | 38       | 21       | 4.85       |     |
| 451X6A | G 284         |            | 42         | 54         | 59       | 22       | 5.10       |     |
| 451X6B | G 284         |            | 0          | 12         | 14       | 22       | 5.10       |     |
| 451X6  | G 284         |            | 25         | 33         | 37       | 22       | 5.10       |     |
| 451X6A | G 285         |            | 18         | 29         | 27       | 20       | 5.46       |     |
| 451X6B | G 285         |            | 8          | 18         | 18       | 20       | 5.46       |     |
| 451X6  | G 285         |            | 14         | 23         | 23       | 20       | 5.46       |     |
| 451X6A | G 286         |            | 8          | 13         | 17       | 17       | 6.61       |     |
| 451X6B | G 286         |            | 8          | 19         | 23       | 17       | 6.61       |     |
| 451X6  | G 286         |            | 8          | 16         | 20       | 17       | 6.61       |     |
| 451X6A | G 287         |            | 11         | 23         | 20       | 6        | 5.69       |     |
| 451X6B | G 287         |            | 0          | 0          | 1        | 6        | 5.69       |     |
| 451X6  | G 287         |            | 6          | 12         | 11       | 6        | 5.69       |     |
| 451X6A | G 288         |            | 8          | 20         | 18       | 5        | 5.51       |     |
| 451X6B | G 288         |            | 0          | 1          | 2        | 5        | 5.51       |     |
| 451X6  | G 288         |            | 5          | 11         | 10       | 5        | 5.51       |     |
| 451X6A | G 289         |            | 18         | 34         | 34       | 8        | 5.38       |     |
| 451X6B | G 289         |            | 0          | 1          | 1        | 8        | 5.38       |     |
| 451X6  | G 289         |            | 11         | 18         | 18       | 8        | 5.38       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | G 290         |            | 18         | 30         | 29       | 6        | 5.34       |     |
| 451X6B | G 290         |            | 0          | 1          | 1        | 6        | 5.34       |     |
| 451X6  | G 290         |            | 11         | 16         | 15       | 6        | 5.34       |     |
| 451X6A | K 471         |            | 3          | 4          | 6        | 1        | 6.62       |     |
| 451X6B | K 471         |            | 0          | 0          | 0        | 1        | 6.62       |     |
| 451X6  | K 471         |            | 2          | 2          | 4        | 1        | 6.62       |     |
| 451X6A | K 472         |            | 0          | 3          | 6        | 1        | 5.89       |     |
| 451X6B | K 472         |            | 0          | 0          | 0        | 1        | 5.89       |     |
| 451X6  | K 472         |            | 0          | 2          | 3        | 1        | 5.89       |     |
| 451X6A | L 478         |            | 5          | 4          | 4        | 1        | 6.29       |     |
| 451X6B | L 478         |            | 0          | 0          | 0        | 1        | 6.29       |     |
| 451X6  | L 478         |            | 3          | 2          | 2        | 1        | 6.29       |     |
| 451X6A | L 479         |            | 5          | 4          | 5        | 2        | 5.94       |     |
| 451X6B | L 479         |            | 0          | 0          | 0        | 2        | 5.94       |     |
| 451X6  | L 479         |            | 3          | 2          | 3        | 2        | 5.94       |     |
| 451X6A | L 480         |            | 0          | 0          | 1        | 0        | 5.57       |     |
| 451X6B | L 480         |            | 0          | 0          | 0        | 0        | 5.57       |     |
| 451X6  | L 480         |            | 0          | 0          | 0        | 0        | 5.57       |     |
| 451X6A | L 481         |            | 0          | 7          | 7        | 2        | 5.65       |     |
| 451X6B | L 481         |            | 0          | 0          | 0        | 2        | 5.65       |     |
| 451X6  | L 481         |            | 0          | 3          | 4        | 2        | 5.65       |     |
| 451X6A | L 482         |            | 3          | 1          | 3        | 1        | 6.20       |     |
| 451X6B | L 482         |            | 0          | 0          | 0        | 1        | 6.20       |     |
| 451X6  | L 482         |            | 2          | 1          | 1        | 1        | 6.20       |     |
| 451X6A | L 483         |            | 5          | 4          | 5        | 3        | 5.61       |     |
| 451X6B | L 483         |            | 0          | 0          | 0        | 3        | 5.61       |     |
| 451X6  | L 483         |            | 3          | 2          | 3        | 3        | 5.61       |     |
| 451X6A | M 502         |            | 11         | 10         | 7        | 1        | 5.68       |     |
| 451X6B | M 502         |            | 0          | 0          | 1        | 1        | 5.68       |     |
| 451X6  | M 502         |            | 6          | 5          | 4        | 1        | 5.68       |     |
| 451X6A | M 503         |            | 3          | 3          | 4        | 1        | 5.65       |     |
| 451X6B | M 503         |            | 0          | 0          | 0        | 1        | 5.65       |     |
| 451X6  | M 503         |            | 2          | 2          | 3        | 1        | 5.65       |     |
| 451X6A | M 504         |            | 3          | 2          | 2        | 1        | 5.43       |     |
| 451X6B | M 504         |            | 0          | 0          | 0        | 1        | 5.43       |     |
| 451X6  | M 504         |            | 2          | 1          | 1        | 1        | 5.43       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | N 521         |            | 5          | 3          | 1        | 0        | 6.02       |     |
| 451X6B | N 521         |            | 0          | 0          | 0        | 0        | 6.02       |     |
| 451X6  | N 521         |            | 3          | 2          | 1        | 0        | 6.02       |     |
| 451X6A | N 522         |            | 5          | 7          | 9        | 0        | 6.05       |     |
| 451X6B | N 522         |            | 0          | 0          | 0        | 0        | 6.05       |     |
| 451X6  | N 522         |            | 3          | 3          | 5        | 0        | 6.05       |     |
| 451X6A | N 523         |            | 3          | 3          | 4        | 1        | 6.52       |     |
| 451X6B | N 523         |            | 0          | 0          | 0        | 1        | 6.52       |     |
| 451X6  | N 523         |            | 2          | 2          | 2        | 1        | 6.52       |     |
| 451X6A | N 524         |            | 8          | 7          | 7        | 1        | 6.50       |     |
| 451X6B | N 524         |            | 0          | 0          | 0        | 1        | 6.50       |     |
| 451X6  | N 524         |            | 5          | 3          | 4        | 1        | 6.50       |     |
| 451X6A | P 575         |            | 8          | 9          | 11       | 3        | 6.32       |     |
| 451X6B | P 575         |            | 0          | 0          | 0        | 3        | 6.32       |     |
| 451X6  | P 575         |            | 5          | 5          | 6        | 3        | 6.32       |     |
| 451X6A | Q 591         |            | 0          | 1          | 2        | 1        | 5.65       |     |
| 451X6B | Q 591         |            | 0          | 0          | 0        | 1        | 5.65       |     |
| 451X6  | Q 591         |            | 0          | 1          | 1        | 1        | 5.65       |     |
| 451X6A | Q 592         |            | 5          | 4          | 7        | 1        | 5.74       |     |
| 451X6B | Q 592         |            | 0          | 0          | 0        | 1        | 5.74       |     |
| 451X6  | Q 592         |            | 3          | 2          | 4        | 1        | 5.74       |     |
| 451X6A | R 603         |            | 5          | 8          | 10       | 4        | 6.33       |     |
| 451X6B | R 603         |            | 0          | 0          | 0        | 4        | 6.33       |     |
| 451X6  | R 603         |            | 3          | 4          | 5        | 4        | 6.33       |     |
| 451X6A | T 853         |            | 0          | 0          | 1        | 1        | 6.05       |     |
| 451X6B | T 853         |            | 0          | 0          | 0        | 1        | 6.05       |     |
| 451X6  | T 853         |            | 0          | 0          | 1        | 1        | 6.05       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
 G 282 ALIGN COUNTER TIMERS  
 G 283 ALIGN LOGIC POWER SUPPLIES  
 G 284 ALIGN MICROLOGIC POWER SUPPLIES  
 G 285 ALIGN PROGRAMMABLE PULSE GENERATORS (PPG)  
 G 286 ALIGN RADIO FREQUENCY (RF) GENERATORS  
 G 287 ALIGN SYNCHRO BRIDGES  
 G 288 ALIGN SYNCHRO STANDARDS  
 G 289 ALIGN TRYON POWER SUPPLIES  
 G 290 ALIGN TRYON POWER SUPPLY CONTROLLERS  
 K 471 ALIGN AND CALIBRATE ATTITUDE AND RATE TEST STATION RATE  
 TABLES

**USAF JOB INVENTORY TASK STATEMENTS:**

K 472 CALIBRATE ATTITUDE AND RATE TEST STATIONS  
L 478 ALIGN AND CALIBRATE ELECTRONIC SYSTEMS TEST STATION RATE  
TABLES  
L 479 ALIGN AND CALIBRATE ELECTRONIC SYSTEMS TEST STATIONS  
L 480 ALIGN AND CALIBRATE INDICATORS AND MODULES TEST STATION  
RATE TABLES  
L 481 ALIGN AND CALIBRATE INDICATORS AND MODULES TEST STATIONS  
L 482 ALIGN AND CALIBRATE INDICATORS AND SENSORS TEST STATION  
RATE TABLES  
L 483 ALIGN AND CALIBRATE INDICATORS AND SENSORS TEST STATIONS  
M 502 ALIGN AND CALIBRATE COMPUTER (6803) TEST STATIONS  
M 503 ALIGN AND CALIBRATE CONVERTER AND FLIGHT CONTROLS TEST  
STATIONS  
M 504 ALIGN AND CALIBRATE NAVIGATION AND FLIGHT CONTROLS TEST  
STATIONS  
N 521 ALIGN AND CALIBRATE RADAR ALTIMETER (6836) TEST STATIONS  
N 522 ALIGN AND CALIBRATE VIDEO (6815) TEST STATIONS  
N 523 ALIGN AND CALIBRATE VIDEO (6875) TEST STATIONS  
N 524 ALIGN AND CALIBRATE VIDEO (6885) TEST STATIONS  
P 575 ALIGN AND CALIBRATE RECEIVER-TRANSMITTER-MODULATOR TEST  
STATIONS (6802, 6872, 6882)  
Q 591 ALIGN AND CALIBRATE INDICATORS AND SERVOS (6895) TEST  
STATIONS  
Q 592 ALIGN AND CALIBRATE SERVOS AND INDICATORS (6825) TEST  
STATIONS  
R 603 ALIGN AND CALIBRATE DIGITAL NAVIGATION AND WEAPONS DELIVERY  
(6863) TEST STATIONS  
T 853 CALIBRATE DISPLAYS TEST STATIONS

**TASK NUMBER:** 60050

**TASK STATEMENT:**

PERFORM PERIODIC INSPECTIONS ON AUTOMATIC TEST STATIONS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

AIR HOSE  
ALL PURPOSE SPRAY CLEANER  
BRUSHES  
CONTACT CLEANER  
CTK  
LONG Q-TIPS  
MAGNETIC HEAD CLEANER  
RAGS

**REFERENCES:**

APPLICABLE TEST STATION TO

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CLEAN CONTACTS (F 210)  
A CLEAN PUNCH TAPE READER HEADS (F 212)  
A CLEAN PUNCH TAPES (F 213)  
A CLEAN TEST STATION BLOWERS AND FILTERS (F 219)  
A CLEAN TRUs AND TRU BAYS  
A ORDER PARTS  
A PERFORM MAINTENANCE TEST OF AUTOMATIC TEST  
STATION (TASK NUMBER: 60020)  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)

**SKILLS:**

S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 212         |            | 3          | 6          | 12       | 14       | 3.08       |     |
| 451X6B | F 212         |            | 27         | 24         | 27       | 14       | 3.08       |     |
| 451X6  | F 212         |            | 12         | 14         | 19       | 14       | 3.08       |     |
| 451X6A | F 213         |            | 0          | 0          | 4        | 5        | 3.09       |     |
| 451X6B | F 213         |            | 19         | 7          | 7        | 5        | 3.09       |     |
| 451X6  | F 213         |            | 8          | 3          | 5        | 5        | 3.09       |     |
| 451X6A | F 219         |            | 89         | 88         | 82       | 45       | 2.78       |     |
| 451X6B | F 219         |            | 85         | 85         | 78       | 45       | 2.78       |     |
| 451X6  | F 219         |            | 86         | 85         | 80       | 45       | 2.78       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
F 212 CLEAN PUNCH TAPE READER HEADS  
F 213 CLEAN PUNCH TAPES  
F 219 INSPECT AND CLEAN TEST STATION BLOWERS AND FILTERS  
F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
LINE REPLACEABLE UNITS (LRU)

**TASK NUMBER:** 60060

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN F-111D RADAR SST

**TASK NOTES:**

SST IS LOCATED ONLY AT CANNON AFB, NM. IT CONSISTS OF AN MRU, EPU, LVPS, MFG, DDP, ARS RACK, AND TRANSMITTER. THE SST WILL BE REPLACED BY DTS.

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

BIDEC CONVERTER  
CTK  
DIGITAL MULTIMETER  
OSCILLOSCOPE  
RF POWER METER

**REFERENCES:**

ENGINEERING BLUEPRINTS (AUTONETICS)  
27 TFW LCL-033 (ARS ANTENNA CHECKLIST)

**CONDITIONS:**

COOLING AIR REQUIRED; 2 PERSON REQUIREMENT

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A PERFORM OPERATIONAL TEST OF F-111D ARS ANTENNA (TASK NUMBER: 60090)

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S OPERATE SST  
S PERFORM VISUAL INSPECTIONS  
S USE BIDEC CONVERTER TO MEASURE ANGLE OF ANTENNA  
S USE COMMON HANDTOOLS  
S USE DIGITAL MULTIMETER  
S USE OSCILLOSCOPE TO MEASURE AC/DC VOLTAGES AND PULSE CHARACTERISTICS

**SKILLS:**

S USE RF POWER METER TO MEASURE RF OUTPUT  
S VERIFY MASTER FREQUENCY GENERATOR OUTPUT LEVELS (N 564)

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY SYSTEM THEORY  
K APPLY TECHNICAL DATA  
K DETERMINE F-111D LOCAL OSCILLATOR AND TWT OUTPUT LEVELS (N 529)  
K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING  
K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)  
K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | N 529         |            | 0          | 3          | 2        | 0        | 6.35       |     |
| 451X6B | N 529         |            | 0          | 0          | 0        | 0        | 6.35       |     |
| 451X6  | N 529         |            | 0          | 2          | 1        | 0        | 6.35       |     |
| 451X6A | N 564         |            | 0          | 3          | 2        | 0        | 6.07       |     |
| 451X6B | N 564         |            | 0          | 0          | 0        | 0        | 6.07       |     |
| 451X6  | N 564         |            | 0          | 2          | 1        | 0        | 6.07       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
N 529 DETERMINE F-111D LOCAL OSCILLATOR AND TRAVELING WAVE TUBE OUTPUT LEVELS  
N 564 VERIFY MASTER FREQUENCY GENERATOR OUTPUT LEVELS

**TASK NUMBER:** 60070

**TASK STATEMENT:**

ALIGN AND CALIBRATE F-111D SST RANGE

**TASK NOTES:**

SST IS LOCATED ONLY AT CANNON AFB, NM. IT CONSISTS OF AN MRU, EPU, LVPS, MFG, DDP, ARS RACK, AND TRANSMITTER. THE SST WILL BE REPLACED BY DTS.

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

BORESIGHT TELESCOPES  
CALIBRATED REFERENCE PLATE  
CLINOMETER  
CTK  
HOLDING FIXTURE  
LADDER  
TAPE MEASURE  
TELESCOPE MOUNT  
THEODOLITE

**REFERENCES:**

SST BORESIGHT RANGE AND EQUIPMENT REQUIREMENTS CHECKLIST

**CONDITIONS:**

AN OPERATIONAL ANTENNA UNIT; A VISUALLY UNOBSTRUCTED AREA FOR APPROXIMATELY 40' IN FRONT OF THE HOLDING FIXTURE; 2 PERSON REQUIREMENT

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A DETERMINE BORESIGHT TELESCOPE MOUNT ERROR  
A DETERMINE TARGET HORN POINTING ANGLE  
A TEST OR ADJUST RELATIVE ROLL ANGLE

**SKILLS:**

- S OPERATE SST.
- S POSITION LADDER
- S USE BORESIGHT TELESCOPE TO ALIGN RANGE
- S USE CLINOMETER TO CALIBRATE RANGE
- S USE COMMON HANDTOOLS
- S USE HOLDING FIXTURE TO SECURE MOUNT AND GIMBAL SUPPORT UNIT  
OF ARS ANTENNA
- S USE REFERENCE PLATE TO DETERMINE TRUE ZERO
- S USE TAPE MEASURE
- S USE TELESCOPE MOUNT TO SECURE TELESCOPE
- S USE THEODOLITE TO ALIGN RANGE

**KNOWLEDGE:**

- K ANNOTATE FORMS
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY TECHNICAL DATA
- K PERFORM MATHEMATICAL CONVERSIONS

**TASK NUMBER:** 60080

**TASK STATEMENT:**

REPAIR F-111D SST

**TASK NOTES:**

SST IS LOCATED ONLY AT CANNON AFB, NM. IT CONSISTS OF AN MRU, EPU, LVPS, MFG, DDP, ARS RACK, AND TRANSMITTER. THE SST WILL BE REPLACED BY DTS.

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK

**REFERENCES:**

12P2-2APQ130-2  
ENGINEERING BLUEPRINTS

**CONDITIONS:**

2 PERSON REQUIREMENT

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

- A ALIGN AND CALIBRATE F-111D SST RANGE (TASK NUMBER: 60070)
- A ORDER PARTS
- A REMOVE AND REPLACE ARS COMPONENTS (I 431)
- A REMOVE AND REPLACE TRUs (TASK NUMBER: 61380)
- A REPAIR TOGGLE AND ROTARY SWITCHES
- A REPAIR WIRING (TASK NUMBER: 61440)

**SKILLS:**

- S CONNECT ADAPTER AND CABLES
- S USE COMMON HANDTOOLS

**KNOWLEDGE:**

- K ANNOTATE FORMS
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS

**KNOWLEDGE:**

K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 268         |            | 3          | 12         | 19       | 19       | 3.93       |     |
| 451X6B | F 268         |            | 27         | 39         | 34       | 19       | 3.93       |     |
| 451X6  | F 268         |            | 12         | 25         | 26       | 19       | 3.93       |     |
| 451X6A | I 431         |            | 0          | 10         | 14       | 1        | 4.78       |     |
| 451X6B | I 431         |            | 0          | 0          | 0        | 1        | 4.78       |     |
| 451X6  | I 431         |            | 0          | 5          | 8        | 1        | 4.78       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 268 REMOVE OR REPLACE SIMULATOR OR MOCKUP SUBASSEMBLIES  
I 431 REMOVE OR REPLACE ARS COMPONENTS

**TASK NUMBER:** 60090

**TASK STATEMENT:**

PERFORM OPERATIONAL TEST OF THE F-111D ARS ANTENNA

**TASK NOTES:**

ACCOMPLISHED ON SST AT CANNON AFB, NM. TEST SRUs BY  
PERFORMING OPERATIONAL CHECK OF ARS ANTENNA

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

BREAKOUT BOX  
CTK  
DIGITAL VOLTMETER  
SST  
VECTOR VOLTMETER

**REFERENCES:**

27 TFW LCL-033 (ARS ANTENNA CHECKLIST)

**CONDITIONS:**

COOLING AIR REQUIRED; 2 PERSON REQUIREMENT; KNOWN GOOD ARS  
ANTENNA (DETERMINING BAD ACTOR)

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR; FUNCTIONAL CHECK

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CHECK FOR ANTENNA OSCILLATION  
A CHECK OUTPUT OF TIME SHARE SWITCH  
A CHECK POSITION TRANSMITTERS (TILT, AZIMUTH, AND PITCH)  
A ELECTRICALLY BORESIGHT F-111D ARS ANTENNAS (N 535)  
A PERFORM AZIMUTH ROTARY JOINT TEST  
A PERFORM AZIMUTH TILT NULL TEST  
A PERFORM CIRCULAR POLARIZER TEST  
A PERFORM MOTION COMPENSATION TEST  
A PERFORM PENCIL/SPOIL TEST  
A PERFORM PITCH CAGE TEST  
A PERFORM PRESSURE TEST

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
 S CONNECT ANTENNA  
 S OPERATE SST  
 S PERFORM VISUAL INSPECTIONS  
 S PROBE DC VOLTAGES USING BREAK-OUT BOXES  
 S STOW/UNSTOW ANTENNA  
 S USE COMMON HANDTOOLS  
 S USE DIGITAL VOLTMETER TO MEASURE DC VOLTAGES  
 S USE GAUGE ON INTERFACE PANEL  
 S USE PECULIAR TEST EQUIPMENT BAY  
 S USE VECTOR VOLTMETER TO CHECK PHASING AND NULLS

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY SYSTEM THEORY  
 K APPLY TECHNICAL DATA  
 K DISTINGUISH BETWEEN HIGH AND LOW PITCH ON DIAPHRAGM VACUUM

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 243         |            | 61         | 62         | 65       | 39       | 4.32       |     |
| 451X6B | F 243         |            | 50         | 60         | 59       | 39       | 4.32       |     |
| 451X6  | F 243         |            | 55         | 60         | 62       | 39       | 4.32       |     |
| 451X6A | N 530         |            | 0          | 2          | 1        | 0        | 5.64       |     |
| 451X6B | N 530         |            | 0          | 0          | 0        | 0        | 5.64       |     |
| 451X6  | N 530         |            | 0          | 1          | 0        | 0        | 5.64       |     |
| 451X6A | N 531         |            | 0          | 3          | 2        | 0        | 5.10       |     |
| 451X6B | N 531         |            | 0          | 0          | 0        | 0        | 5.10       |     |
| 451X6  | N 531         |            | 0          | 2          | 1        | 0        | 5.10       |     |
| 451X6A | N 532         |            | 0          | 3          | 2        | 0        | 5.54       |     |
| 451X6B | N 532         |            | 0          | 0          | 0        | 0        | 5.54       |     |
| 451X6  | N 532         |            | 0          | 2          | 1        | 0        | 5.54       |     |
| 451X6A | N 533         |            | 0          | 3          | 2        | 0        | 5.45       |     |
| 451X6B | N 533         |            | 0          | 0          | 0        | 0        | 5.45       |     |
| 451X6  | N 533         |            | 0          | 2          | 1        | 0        | 5.45       |     |
| 451X6A | N 534         |            | 0          | 3          | 2        | 0        | 5.34       |     |
| 451X6B | N 534         |            | 0          | 0          | 0        | 0        | 5.34       |     |
| 451X6  | N 534         |            | 0          | 2          | 1        | 0        | 5.34       |     |
| 451X6A | N 535         |            | 0          | 3          | 2        | 0        | 6.58       |     |
| 451X6P | N 535         |            | 0          | 0          | 0        | 0        | 6.58       |     |
| 451X6  | N 535         |            | 0          | 2          | 1        | 0        | 6.58       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | N 561         |            | 0          | 2          | 2        | 0        | 5.06       |     |
| 451X6B | N 561         |            | 0          | 0          | 0        | 0        | 5.06       |     |
| 451X6  | N 561         |            | 0          | 1          | 1        | 0        | 5.06       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 243 PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECTION (T AND I)  
OF LRUs ISSUED FROM SUPPLY

N 530 DETERMINE STATUS OF F-111D BAD ACTOR ARS ELECTRONICS  
PROCESSOR UNITS

N 531 DETERMINE STATUS OF F-111D BAD ACTOR ARS LOW VOLTAGE POWER  
SUPPLIES

N 532 DETERMINE STATUS OF F-111D BAD ACTOR ARS MASTER FREQUENCY  
GENERATORS

N 533 DETERMINE STATUS OF F-111D BAD ACTOR ARS MICROWAVE RECEIVER  
UNITS

N 534 DETERMINE STATUS OF F-111D BAD ACTOR ARS TRANSMITTERS

N 535 ELECTRICALLY BORESIGHT F-111D ARS ANTENNAS

N 561 TEST F-111D ARS ANTENNA SRUs

**TASK NUMBER:** 60100

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN THE F-111D ARS ANTENNA

**TASK NOTES:**

ACCOMPLISHED ON SST AT CANNON AFB, NM

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

VECTOR VOLTMETER

**REFERENCES:**

12P2-2APQ130-2

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**SKILLS:**

- S PERFORM VISUAL INSPECTIONS
- S USE VECTOR VOLTMETER TO CHECK NULLS

**KNOWLEDGE:**

- K ANNOTATE FORMS
- K APPLY LRU THEORY OF OPERATION
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY RESISTOR THEORY OF OPERATION
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY SOLID STATE DIODE THEORY OF OPERATION
- K APPLY SYNCHRO-SERVO THEORY OF OPERATION
- K APPLY TECHNICAL DATA
- K ISOLATE FAULTY RESISTORS
- K ISOLATE FAULTY SOLID STATE DIODES
- K ISOLATE FAULTY TRANSISTOR AMPLIFIER STABILIZATION CIRCUITS
- K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)
- K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)
- K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)
- K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
LINE REPLACEABLE UNITS (LRU)  
F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES

**TASK NUMBER:** 60110

**TASK STATEMENT:** .

REPAIR THE F-111D ARS ANTENNA

**TASK NOTES:**

ACCOMPLISHED ON SST AT CANNON AFB, NM. ADJUSTMENTS ARE MADE DURING OPERATIONAL CHECK.

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
VECTOR VOLTMETER

**REFERENCES:**

12P2-2APQ130-2  
UTM-APQ130F-111  
APQ-130 ANTENNA BORESIGHTING WAIVER

**CONDITIONS:**

COOLING AIR REQUIRED; 2 PERSON REQUIREMENT

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ADJUST CLEVIS BOLTS ON REFLECTOR  
A ADJUST VIDEO PHASE SHIFT OF F-111D ARS ANTENNAS (N 520)  
A ALIGN F-111D ARS ANTENNA SRUs (N 526)  
A FLIP THE HARNESS  
A ORDER PARTS  
A PERFORM OPERATIONAL TEST OF F-111D ARS ANTENNA  
(TASK NUMBER: 60090)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)  
A REMOVE AND REPLACE WAVEGUIDES  
A REPAIR GSU COMPONENTS  
A REPAIR WIRING (TASK NUMBER: 61440)

**SKILLS:**

S REMOVE AND REPLACE HARNESS  
S REMOVE REFLECTOR  
S USE COMMON HANDTOOLS  
S USE VECTOR VOLTMETER TO ADJUST PHASING

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | N 520         |            | 0          | 3          | 2        | 0        | 6.89       |     |
| 451X6B | N 520         |            | 0          | 0          | 0        | 0        | 6.89       |     |
| 451X6  | N 520         |            | 0          | 2          | 1        | 0        | 6.89       |     |
| 451X6A | N 525         |            | 0          | 3          | 3        | 0        | 6.60       |     |
| 451X6B | N 525         |            | 0          | 0          | 0        | 0        | 6.60       |     |
| 451X6  | N 525         |            | 0          | 2          | 2        | 0        | 6.60       |     |
| 451X6A | N 526         |            | 0          | 3          | 3        | 0        | 6.48       |     |
| 451X6B | N 526         |            | 0          | 0          | 0        | 0        | 6.48       |     |
| 451X6  | N 526         |            | 0          | 2          | 2        | 0        | 6.48       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

N 520 ADJUST VIDEO PHASE SHIFT OF F-111D ARS ANTENNAS  
N 525 ALIGN F-111D ARS ANTENNA FOR CORRECT LOCKON  
N 526 ALIGN F-111D ARS ANTENNA SRUs

**TASK NUMBER:** 60120

**TASK STATEMENT:**

MAINTAIN TFR MOCKUP

**TASK NOTES:**

THE MOCKUP CONSISTS OF: 2 ANTENNA RECEIVERS, 2 TFR COMPUTERS,  
2 TRANSMITTER-SYNCHRONIZERS, 2 TFR POWER SUPPLIES, TFR INDICATOR,  
TFR CONTROL BOX, AND RACK

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
DIGITAL VOLTMETER  
ECHO ABSORBING CHAMBER  
MULTIMETER  
OSCILLOSCOPE

**REFERENCES:**

LOCAL CHECKLIST  
12AE1-73-1048A  
12P2-2APQ110-12 (ORIGINAL SYSTEM)  
12P2-2APQ128-2 (UPDATED SYSTEM)  
APPLICABLE FLIGHTLINE TO  
LOCAL INTERCONNECT DRAWINGS

**CONDITIONS:**

15' OF CLEARANCE REQUIRED TO TRANSMIT OUTDOORS; ECHO  
ABSORBING CHAMBER REQUIRED TO TRANSMIT INDOORS;  
2 PERSON REQUIREMENT

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

- A ALIGN SIMULATORS OR MOCKUPS (F 205)
- A CHECK OUTPUTS OF MOCKUP
- A ISOLATE MALFUNCTIONS IN TFR MOCKUPS (I 424)
- A ORDER PARTS
- A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)
- A REMOVE AND REPLACE TFR COMPONENTS (I 438)

## ACTIVITIES

- A REPAIR WIRING (TASK NUMBER: 61440)
- A VERIFY MOCKUP SERVICABILITY

## SKILLS:

- S CONNECT ADAPTER AND CABLES
- S CONNECT WAVEGUIDES
- S INSTALL LRUs
- S INSTALL SINGLE TFR CHANNEL
- S OPERATE TFR MOCKUP
- S PERFORM VISUAL INSPECTIONS
- S USE CHAMBER TO ABSORB RF WHEN TRANSMITTING INDOORS
- S USE COMMON HANDTOOLS
- S USE DIGITAL VOLTMETER TO MEASURE DC VOLTAGES
- S USE MULTIMETER TO CHECK CONTINUITY
- S USE OSCILLOSCOPE TO CHECK VIDEO SIGNALS

## KNOWLEDGE:

- K ANNOTATE FORMS
- K APPLY CAPACITOR THEORY OF OPERATION
- K APPLY LRU THEORY OF OPERATION
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY RESISTOR THEORY OF OPERATION
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY SOLID STATE DIODE THEORY OF OPERATION
- K APPLY TECHNICAL DATA
- K APPLY TFR SYSTEM INTEGRATION THEORY OF OPERATION
- K APPLY TRANSFORMER THEORY OF OPERATION
- K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING
- K DETERMINE WHICH SECTION OF TEST TO EXECUTE
- K ISOLATE FAULTY CAPACITORS
- K ISOLATE FAULTY SOLID STATE DIODES
- K ISOLATE FAULTY TRANSFORMERS
- K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)
- K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)
- K TUNE ANTENNA RECEIVER TO TRANSMITTER SYNCHRONIZER
- K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)
- K VERIFY SUSPECTED FAULTY SRUs

## RELATED OCCUPATIONAL SURVEY DATA:

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 205         |            | 5          | 12         | 17       | 14       | 5.41       |     |
| 451X6B | F 205         |            | 46         | 42         | 33       | 14       | 5.41       |     |
| 451X6  | F 205         |            | 22         | 27         | 24       | 14       | 5.41       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 234         |            | 3          | 17         | 22       | 20       | 6.19       |     |
| 451X6B | F 234         |            | 35         | 44         | 38       | 20       | 6.19       |     |
| 451X6  | F 234         |            | 15         | 29         | 29       | 20       | 6.19       |     |
| 451X6A | F 268         |            | 3          | 12         | 19       | 19       | 3.93       |     |
| 451X6B | F 268         |            | 27         | 39         | 34       | 19       | 3.93       |     |
| 451X6  | F 268         |            | 12         | 25         | 26       | 19       | 3.93       |     |
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | I 424         |            | 3          | 14         | 16       | 3        | 6.05       |     |
| 451X6B | I 424         |            | 0          | 0          | 0        | 3        | 6.05       |     |
| 451X6  | I 424         |            | 2          | 7          | 9        | 3        | 6.05       |     |
| 451X6A | I 430         |            | 3          | 13         | 16       | 3        | 5.42       |     |
| 451X6B | I 430         |            | 0          | 0          | 0        | 3        | 5.42       |     |
| 451X6  | I 430         |            | 2          | 7          | 8        | 3        | 5.42       |     |
| 451X6A | I 438         |            | 5          | 17         | 20       | 4        | 4.17       |     |
| 451X6B | I 438         |            | 0          | 0          | 0        | 4        | 4.17       |     |
| 451X6  | I 438         |            | 3          | 8          | 10       | 4        | 4.17       |     |
| 451X6A | S 768         |            | 11         | 13         | 15       | 2        | 4.25       |     |
| 451X6B | S 768         |            | 0          | 0          | 2        | 2        | 4.25       |     |
| 451X6  | S 768         |            | 6          | 7          | 9        | 2        | 4.25       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 205 ALIGN SIMULATORS OR MOCKUPS  
 F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
 LINE REPLACEABLE UNITS (LRU)  
 F 234 ISOLATE MALFUNCTIONS IN SIMULATORS OR MOCKUPS  
 F 268 REMOVE OR REPLACE SIMULATOR OR MOCKUP SUBASSEMBLIES  
 F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
 I 424 ISOLATE MALFUNCTIONS IN TFR MOCKUPS  
 I 430 PERFORM OPERATIONAL TESTS OF TFR MOCKUPS  
 I 438 REMOVE OR REPLACE TFR COMPONENTS  
 S 768 PERFORM OPERATIONAL TESTS OF TFR RACKS

**TASK NUMBER:** 60130

**TASK STATEMENT:**

MAINTAIN ARS MOCKUP

**TASK NOTES:**

ARS MOCKUP CONSISTS OF INDICATOR RECEIVER, RADAR SET CONTROL, MRT, TRACKING HANDLE, ELECTRICAL SYNCHRONIZER, ANTENNA, ACU, AND ROLL PEDESTAL. OWNED BY CONTRACTOR (GENERAL ELECTRIC).

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
DIGITAL MULTIMETER  
ECHO ABSORBING SCREEN  
OSCILLOSCOPE

**REFERENCES:**

12AEI-73-4009  
LOCAL CHECKLIST (BEING DEVELOPED)  
ALR 32271 (GENERAL DYNAMIC STUDENT HANDBOOK)

**CONDITIONS:**

CLEAR AND OPEN AREA TO TRANSMIT; 2 PERSON REQUIREMENT

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN SIMULATORS OR MOCKUPS (F 205)  
A ISOLATE MALFUNCTIONS IN SIMULATORS OR MOCKUPS (F 234)  
A ORDER PARTS  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE LRUs  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REPAIR WIRING (TASK NUMBER: 61440)  
A VERIFY MOCKUP SERVICEABILITY

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
 S CONNECT WAVEGUIDES  
 S INSTALL LRU#  
 S OPERATE MOCKUP  
 S PERFORM VISUAL INSPECTIONS  
 S PRESSURIZE LRU# (TASK NUMBER: 61460)  
 S USE COMMON HANDTOOLS  
 S USE DIGITAL MULTIMETER TO CHECK VOLTAGES  
 S USE OSCILLOSCOPE TO CHECK VIDEO PULSES

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY LRU THEORY OF OPERATION  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY SYSTEM INTEGRATION THEORY OF OPERATION  
 K APPLY TECHNICAL DATA  
 K CHECK ECHO ABSORBING SCREEN FOR PROPER POSITIONING  
 K DETERMINE HOW A BREAK IN WIRING WILL AFFECT LRU OPERATION  
 K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING  
 K DETERMINE WHICH SECTION OF TEST TO EXECUTE  
 K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)  
 K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 205         |            | 5          | 12         | 17       | 14       | 5.41       |     |
| 451X6B | F 205         |            | 46         | 42         | 33       | 14       | 5.41       |     |
| 451X6  | F 205         |            | 22         | 27         | 24       | 14       | 5.41       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | F 234         |            | 3          | 17         | 22       | 20       | 6.19       |     |
| 451X6B | F 234         |            | 35         | 44         | 38       | 20       | 6.19       |     |
| 451X6  | F 234         |            | 15         | 29         | 29       | 20       | 6.19       |     |
| 451X6A | F 268         |            | 3          | 12         | 19       | 19       | 3.93       |     |
| 451X6B | F 268         |            | 27         | 39         | 34       | 19       | 3.93       |     |
| 451X6  | F 268         |            | 12         | 25         | 26       | 19       | 3.93       |     |
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | I 411         |            | 0          | 7          | 10       | 0        | 6.26       |     |
| 451X6B | I 411         |            | 0          | 0          | 0        | 0        | 6.26       |     |
| 451X6  | I 411         |            | 0          | 3          | 5        | 0        | 6.26       |     |
| 451X6A | I 418         |            | 0          | 7          | 10       | 1        | 6.57       |     |
| 451X6B | I 418         |            | 0          | 0          | 0        | 1        | 6.57       |     |
| 451X6  | I 418         |            | 0          | 3          | 5        | 1        | 6.57       |     |
| 451X6A | I 429         |            | 0          | 8          | 12       | 1        | 5.31       |     |
| 451X6B | I 429         |            | 0          | 0          | 0        | 1        | 5.31       |     |
| 451X6  | I 429         |            | 0          | 4          | 6        | 1        | 5.31       |     |
| 451X6A | N 562         |            | 0          | 3          | 2        | 0        | 5.16       |     |
| 451X6B | N 562         |            | 0          | 0          | 0        | 0        | 5.16       |     |
| 451X6  | N 562         |            | 0          | 2          | 1        | 0        | 5.16       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 205 ALIGN SIMULATORS OR MOCKUPS  
 F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
 LINE REPLACEABLE UNITS (LRU)  
 F 234 ISOLATE MALFUNCTIONS IN SIMULATORS OR MOCKUPS  
 F 268 REMOVE OR REPLACE SIMULATOR OR MOCKUP SUBASSEMBLIES  
 F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
 I 411 ALIGN ATTACK RADAR SYSTEM (ARS) MOCKUPS  
 I 418 ISOLATE MALFUNCTIONS IN ARS MOCKUPS  
 I 429 PERFORM OPERATIONAL TESTS OF ARS MOCKUPS  
 N 562 VERIFY ARS ANTENNA RACKS

**TASK NUMBER:** 60140

**TASK STATEMENT:** .

MAINTAIN LARA MOCKUP

**TASK NOTES:**

LARA MOCKUP CONSISTS OF 2 LARAs, LARA RACK, LAM, 2 ANTENNAS, ANALOG MULTIPLEXER, LARA INDICATOR, 2 FILTERS, AND 300' OF DELAY LINE

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
DIGITAL MULTIMETER

**REFERENCES:**

LOCAL CHECKLIST  
APPLICABLE FLIGHTLINE TO

**CONDITIONS:**

2 PERSON REQUIREMENT

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

- A ALIGN SIMULATORS OR MOCKUPS (F 205)
- A ISOLATE MALFUNCTIONS IN SIMULATORS OR MOCKUPS (F 234)
- A ORDER PARTS
- A REMOVE AND REPLACE DELAY LINES
- A REMOVE AND REPLACE LRUs
- A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)
- A REPAIR WIRING (TASK NUMBER: 61440)
- A VERIFY MOCKUP SERVICEABILITY

**SKILLS:**

- S CONNECT ADAPTER AND CABLES
- S INSTALL LRUs
- S OPERATE LARA MOCKUP

**SKILLS:**

S PERFORM VISUAL INSPECTIONS  
 S USE COMMON HANDTOOLS  
 S USE DIGITAL MULTIMETER TO CHECK CONTINUITY

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY LRU THEORY OF OPERATION  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY SYSTEM INTEGRATION THEORY OF OPERATION  
 K APPLY TECHNICAL DATA  
 K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)  
 K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
 K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 205         |            | 5          | 12         | 17       | 14       | 5.41       |     |
| 451X6B | F 205         |            | 46         | 42         | 33       | 14       | 5.41       |     |
| 451X6  | F 205         |            | 22         | 27         | 24       | 14       | 5.41       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | F 234         |            | 3          | 17         | 22       | 20       | 6.19       |     |
| 451X6B | F 234         |            | 35         | 44         | 38       | 20       | 6.19       |     |
| 451X6  | F 234         |            | 15         | 29         | 29       | 20       | 6.19       |     |
| 451X6A | F 268         |            | 3          | 12         | 19       | 19       | 3.93       |     |
| 451X6B | F 268         |            | 27         | 39         | 34       | 19       | 3.93       |     |
| 451X6  | F 268         |            | 12         | 25         | 26       | 19       | 3.93       |     |
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 205 ALIGN SIMULATORS OR MOCKUPS  
 F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR LINE REPLACEABLE UNITS (LRU)  
 F 234 ISOLATE MALFUNCTIONS IN SIMULATORS OR MOCKUPS  
 F 268 REMOVE OR REPLACE SIMULATOR OR MOCKUP SUBASSEMBLIES  
 F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES

**TASK NUMBER:** 60150

**TASK STATEMENT:**

PERFORM CONFIDENCE TESTS OF AIS/R TEST STATIONS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK

TORQUE WRENCH (PRESSURE SIMULATOR SYSTEM)

**REFERENCES:**

33D7-38-208-1

33D7-38-209-1

33D7-38-227-1

33D7-38-228-1

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR; POWER-ON

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ENTER HEADER DATA

A INITIALIZE CONFIDENCE TEST

**SKILLS:**

S CONNECT ADAPTER AND CABLES

S CONNECT ANCILLARY EQUIPMENT

S OPERATE TEST STATION

S USE KEYBOARD

S USE TORQUE WRENCH

**KNOWLEDGE:**

K ANNOTATE FORMS

K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS

K APPLY SHOP SAFETY PROCEDURES

K APPLY TECHNICAL DATA

K DETERMINE WHICH SECTION OF TEST TO EXECUTE

**KNOWLEDGE:**

K FOLLOW INSTRUCTIONS ON CRT AND PCM  
K INTERPRET FLAG INDICATIONS ON PCM  
K INTERPRET PRINTOUT

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | H 385         |            | 16         | 11         | 12       | 7        | 3.84       |     |
| 451X6B | H 385         |            | 0          | 1          | 2        | 7        | 3.84       |     |
| 451X6  | H 385         |            | 9          | 6          | 7        | 7        | 3.84       |     |
| 451X6A | H 386         |            | 16         | 10         | 8        | 5        | 3.84       |     |
| 451X6B | H 386         |            | 0          | 1          | 2        | 5        | 3.84       |     |
| 451X6  | H 386         |            | 9          | 6          | 5        | 5        | 3.84       |     |
| 451X6A | H 387         |            | 13         | 8          | 7        | 7        | 3.74       |     |
| 451X6B | H 387         |            | 0          | 1          | 2        | 7        | 3.74       |     |
| 451X6  | H 387         |            | 8          | 5          | 5        | 7        | 3.74       |     |
| 451X6A | H 388         |            | 11         | 12         | 10       | 7        | 3.86       |     |
| 451X6B | H 388         |            | 0          | 2          | 2        | 7        | 3.86       |     |
| 451X6  | H 388         |            | 6          | 7          | 6        | 7        | 3.86       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

H 385 PERFORM CONFIDENCE TESTS OF AIS/R COMPUTER TEST STATIONS  
OTHER THAN (6803) COMPUTER TEST STATIONS  
H 386 PERFORM CONFIDENCE TESTS OF AIS/R EW TEST STATIONS  
H 387 PERFORM CONFIDENCE TESTS OF AIS/R VIDEO TEST STATIONS  
H 388 PERFORM CONFIDENCE TESTS OF RF TEST STATIONS

**TASK NUMBER:** 60160

**TASK STATEMENT:** .

PERFORM OA/FI TESTS OF AIS/R TEST STATIONS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS  
RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

LOADS  
MAINTENANCE ITA  
POWER ATTENUATORS (RF AND EW ONLY)  
POWER HEADS (RF AND EW ONLY)  
THEODOLITE (VIDEO)

**REFERENCES:**

33D7-38-208-1  
33D7-38-209-1  
33D7-38-227-1  
33D7-38-228-1

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

SUSPECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN CROSS-HAIRS AND MIRRORS TO CALIBRATE THEODOLITE  
A ENTER HEADER DATA  
A INITIALIZE OA/FI  
A UTILIZE FRONT CONTROLS OR MAKE MANUAL INTERVENTION  
(RF AND EW)

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S CONNECT WAVEGUIDES  
S OPERATE TEST STATION  
S USE ATTENUATORS TO SIMULATE LRU SIGNALS  
S USE KEYBOARD  
S USE LOADS TO ATTENUATE SIGNALS, IMPEDANCE MATCH, AND  
SIMULATE LOADS

**SKILLS:**

- S USE POWER HEADS FOR IMPEDANCE MATCHING
- S USE SPECTRUM ANALYZER TO MEASURE POWER, FREQUENCY BANDWIDTHS, ETC (RF AND EW)
- S USE WAVEFORM ANALYZER TO MEASURE PULSE CHARACTERISTICS

**KNOWLEDGE:**

- K ANNOTATE FORMS
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY TECHNICAL DATA
- K DETERMINE WHICH SECTION OF TEST TO EXECUTE
- K FOLLOW INSTRUCTIONS ON CRT AND PCM

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | H 391         |            | 16         | 11         | 10       | 8        | 4.94       |     |
| 451X6B | H 391         |            | 0          | 1          | 2        | 8        | 4.94       |     |
| 451X6  | H 391         |            | 9          | 6          | 6        | 8        | 4.94       |     |
| 451X6A | H 392         |            | 16         | 10         | 7        | 5        | 5.14       |     |
| 451X6B | H 392         |            | 0          | 1          | 2        | 5        | 5.14       |     |
| 451X6  | H 392         |            | 9          | 6          | 5        | 5        | 5.14       |     |
| 451X6A | H 393         |            | 18         | 10         | 7        | 8        | 4.84       |     |
| 451X6B | H 393         |            | 0          | 1          | 2        | 8        | 4.84       |     |
| 451X6  | H 393         |            | 11         | 6          | 5        | 8        | 4.84       |     |
| 451X6A | H 394         |            | 13         | 11         | 8        | 6        | 4.94       |     |
| 451X6B | H 394         |            | 0          | 2          | 2        | 6        | 4.94       |     |
| 451X6  | H 394         |            | 8          | 7          | 5        | 6        | 4.94       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

- H 391 PERFORM OPERATIONAL ASSURANCE/FAULT ISOLATION (OA/FI) TESTS OF AIS/R COMPUTER TEST STATIONS
- H 392 PERFORM OA/FI TESTS OF AIS/R EW TEST STATIONS
- H 393 PERFORM OA/FI TESTS OF AIS/R VIDEO TEST STATIONS
- H 394 PERFORM OA/FI TESTS OF RF TEST STATIONS

**TASK NUMBER: 60170**

**TASK STATEMENT:**

MANIPULATE CIIL

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

AIS/R TEST STATION

**REFERENCES:**

33D7-38-207-11  
CIIL ATLAS DICTIONARY

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

DURING TROUBLESHOOTING

**STANDARDS:**

IAW REFERENCES

**SKILLS:**

S OPERATE TEST STATION  
S USE KEYBOARD  
S USE PRINTER TO PRINT CIIL

**KNOWLEDGE:**

K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K APPLY VARIOUS CIIL COMMANDS  
K INTERPRET STATION RESPONSES

**TASK NUMBER:** 60180

**TASK STATEMENT:**

PERFORM DIAGNOSTIC CHECKS OF SEL COMPUTERS (H 389)

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

AIS/R TEST STATION  
MAGNETIC DIAGNOSTIC TAPE

**REFERENCES:**

APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
31S5-4-638-4038-1

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

SUSPECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A INITIALIZE COMPUTER  
A LOAD FILE FROM TAPE TO COMPUTER  
A EXECUTE APPROPRIATE FILE

**SKILLS:**

S LOAD DIAGNOSTIC TAPE  
S OPERATE TEST STATION  
S USE COMMUNICATION COMMANDS  
S USE KEYBOARD

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K DETERMINE WHICH FILE ON DIAGNOSTIC TAPE IS REQUIRED

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | H 389         |            | 0          | 3          | 6        | 3        | 4.63       |     |
| 451X6B | H 389         |            | 0          | 0          | 1        | 3        | 4.63       |     |
| 451X6  | H 389         |            | 0          | 2          | 4        | 3        | 4.63       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

H 389 PERFORM DIAGNOSTIC CHECKS OF SEL COMPUTERS

**TASK NUMBER:** 60190

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN AIS/R TEST STATIONS

**TASK NOTES:**

AIS/R TROUBLESHOOTING IS LIMITED DUE TO WARRANTY; ATSCS  
TROUBLESHOOTING IS LIMITED TO TRU IDENTIFICATION

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CAPACITOR SUBSTITUTION BOX

CAPACITOR TESTER

CTK

DC RESTORER

DIGITAL LOGIC PROBE

ESD PROTECTIVE EQUIPMENT

ESS

FIELD STRENGTH TESTER

LOGIC ANALYZER

LOGIC CURRENT TRACER

LOGIC PULSER

MULTIMETER

SIGNATURE ANALYZER

SOURCE LISTING

TDR

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

33AA43-13-1 (ATSCS)

33D7-38-207-11

33DA-122-4-1 (ESS)

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

## ACTIVITIES:

- A EXTEND CCA<sub>s</sub>
- A EXTEND TRU<sub>s</sub>
- A PERFORM CONFIDENCE TEST OF AIS/R TEST STATIONS  
(TASK NUMBER: 60150)
- A PERFORM OA/FI TESTS OF AIS/R TEST STATIONS  
(TASK NUMBER: 60160)

## SKILLS:

- S CONNECT ADAPTER AND CABLES
- S CONNECT WAVEGUIDES
- S INSTALL EXTENDER BOARDS
- S LOAD COMPUTER PROGRAMS
- S MASK/UNMASK TRU USING THE PCM
- S OPERATE TEST STATION
- S PERFORM VISUAL INSPECTIONS
- S USE CAPACITOR SUBSTITUTION BOX
- S USE CAPACITOR TESTER
- S USE COMMON HANDTOOLS
- S USE DC RESTORER
- S USE DIGITAL LOGIC PROBE
- S USE DIGITIZER
- S USE ESS TO TEST TRU<sub>s</sub> (WHEN STATION CANNOT DETECT FAILURE)
- S USE FIELD STRENGTH TESTER
- S USE LOGIC ANALYZER
- S USE LOGIC CURRENT TRACER
- S USE LOGIC PULSER
- S USE MULTIMETER
- S USE SIGNAL GENERATOR
- S USE SIGNATURE ANALYZER
- S USE SPECTRUM ANALYZER
- S USE TDR
- S USE UNIVERSAL COUNTER

## KNOWLEDGE:

- K ANNOTATE FORMS
- K APPLY AC CIRCUIT THEORY OF OPERATION
- K APPLY ATLAS FOR TEST STATION MAINTENANCE
- K APPLY CAPACITOR THEORY OF OPERATION
- K APPLY COMPUTER PERIPHERAL DEVICE THEORY OF OPERATION
- K APPLY COMPUTER SUBASSEMBLY THEORY OF OPERATION
- K APPLY COMPUTER THEORY OF OPERATION
- K APPLY DC CIRCUIT THEORY OF OPERATION
- K APPLY ESD PRECAUTIONS
- K APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT ZENER DIODE THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT COUNTER THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT REGISTER THEORY OF OPERATION
- K APPLY MAIN LOGIC GATE THEORY OF OPERATION
- K APPLY MICROPROCESSOR THEORY OF OPERATION

## KNOWLEDGE:

K APPLY MICROWAVE OSCILLATOR OR AMPLIFIER THEORY OF OPERATION  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY OSCILLATOR CIRCUIT THEORY OF OPERATION  
K APPLY PHOTOSENSITIVE DEVICE THEORY OF OPERATION  
K APPLY POWER SUPPLY FILTER THEORY OF OPERATION  
K APPLY POWER SUPPLY RECTIFIER THEORY OF OPERATION  
K APPLY POWER SUPPLY THEORY OF OPERATION  
K APPLY RCL CIRCUIT THEORY OF BASIC OPERATION  
K APPLY RELAY THEORY OF OPERATION  
K APPLY RESISTOR THEORY OF OPERATION  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY SIMULATED SYNCHRO THEORY OF OPERATION  
K APPLY SOLENOID THEORY OF OPERATION  
K APPLY SYNCHRO-SERVO THEORY OF OPERATION  
K APPLY TECHNICAL DATA  
K APPLY THEORY OF OPERATION OF COMPUTER MEMORIES  
K APPLY THREE-PHASE TRANSFORMER THEORY OF OPERATION  
K APPLY TRANSFORMER THEORY OF OPERATION  
K APPLY TRANSISTOR AMPLIFIER COUPLING CIRCUIT THEORY OF OPERATION  
K APPLY TRANSISTOR AMPLIFIER STABILIZATION CIRCUIT THEORY OF OPERATION  
K APPLY TRANSISTOR AMPLIFIER CIRCUIT THEORY OF OPERATION  
K APPLY TRANSMISSION LINE THEORY OF OPERATION  
K APPLY VOLTAGE REGULATOR THEORY OF OPERATION  
K APPLY WAVEGUIDE THEORY OF OPERATION  
K APPLY WAVESHAPING CIRCUIT THEORY OF OPERATION  
K CONVERT DEGREES, MINUTES, AND SECONDS TO DECIMAL  
K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING  
K DETERMINE WHETHER MALFUNCTION IS IN TEST STATION, LRU, OR ADAPTER (TASK NUMBER: 61360)  
K INTERPRET RESISTOR COLOR CODES  
K ISOLATE FAULTY CAPACITORS  
K ISOLATE FAULTY COMPUTER MAJOR UNITS  
K ISOLATE FAULTY LIMITER CIRCUIT DIODES  
K ISOLATE FAULTY LIMITER CIRCUIT ZENER DIODES  
K ISOLATE FAULTY LIMITER TRANSISTOR CIRCUITS  
K ISOLATE FAULTY LOGIC COUNTERS  
K ISOLATE FAULTY MICROPROCESSORS  
K ISOLATE FAULTY MICROWAVE OSCILLATORS OR AMPLIFIERS  
K ISOLATE FAULTY OSCILLATOR CIRCUITS  
K ISOLATE FAULTY PHOTOSENSITIVE DEVICES  
K ISOLATE FAULTY POWER SUPPLIES  
K ISOLATE FAULTY POWER SUPPLY FILTERS  
K ISOLATE FAULTY POWER SUPPLY RECTIFIERS  
K ISOLATE FAULTY RCL CIRCUITS  
K ISOLATE FAULTY REGISTER LOGIC CIRCUITS  
K ISOLATE FAULTY RELAYS  
K ISOLATE FAULTY RESISTORS  
K ISOLATE FAULTY SIMULATED SYNCHROS  
K ISOLATE FAULTY SOLENOIDS  
K ISOLATE FAULTY THREE-PHASE TRANSFORMERS  
K ISOLATE FAULTY TRANSFORMERS  
K ISOLATE FAULTY TRANSISTOR AMPLIFIER STABILIZATION CIRCUITS

**KNOWLEDGE:**

K ISOLATE FAULTY TRANSISTOR AMPLIFIER COUPLING CIRCUITS  
 K ISOLATE FAULTY TRANSMISSION LINES  
 K ISOLATE FAULTY VOLTAGE REGULATORS  
 K ISOLATE FAULTY WAVEGUIDES  
 K ISOLATE FAULTY WAVESHAPING CIRCUITS  
 K ISOLATE MALFUNCTIONS IN TEST STATION THROUGH INTERCONNECTS OF  
 AN INSTALLED LRU (TASK NUMBER: 61370)  
 K MANIPULATE CIIL (TASK NUMBER: 60170)  
 K PERFORM TRANSMISSION LINE MEASUREMENTS  
 K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION  
 PROCEDURES (F 278)  
 K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
 K TROUBLESHOOT AC CIRCUITS  
 K TROUBLESHOOT COMPUTER MAJOR UNITS  
 K TROUBLESHOOT DC CIRCUITS  
 K TROUBLESHOOT POWER SUPPLY CIRCUITS  
 K TROUBLESHOOT POWER SUPPLY FILTERS  
 K TROUBLESHOOT POWER SUPPLY RECTIFIERS  
 K TROUBLESHOOT RCL CIRCUITS  
 K USE BLOCK DIAGRAMS  
 K USE COMPUTER PROGRAMMING LANGUAGE  
 K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
 K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 225         |            | 5          | 9          | 12       | 9        | 6.81       |     |
| 451X6B | F 225         |            | 4          | 5          | 8        | 9        | 6.81       |     |
| 451X6  | F 225         |            | 5          | 7          | 10       | 9        | 6.81       |     |
| 451X6A | F 227         |            | 0          | 2          | 6        | 6        | 7.01       |     |
| 451X6B | F 227         |            | 4          | 7          | 13       | 6        | 7.01       |     |
| 451X6  | F 227         |            | 2          | 5          | 10       | 6        | 7.01       |     |
| 451X6A | F 230         |            | 32         | 39         | 48       | 27       | 5.94       |     |
| 451X6B | F 230         |            | 46         | 40         | 44       | 27       | 5.94       |     |
| 451X6  | F 230         |            | 37         | 39         | 46       | 27       | 5.94       |     |
| 451X6A | F 231         |            | 32         | 42         | 55       | 31       | 5.81       |     |
| 451X6B | F 231         |            | 38         | 44         | 55       | 31       | 5.81       |     |
| 451X6  | F 231         |            | 34         | 42         | 55       | 31       | 5.81       |     |
| 451X6A | F 237         |            | 0          | 8          | 11       | 7        | 6.73       |     |
| 451X6B | F 237         |            | 0          | 4          | 9        | 7        | 6.73       |     |
| 451X6  | F 237         |            | 0          | 6          | 10       | 7        | 6.73       |     |
| 451X6A | F 238         |            | 18         | 34         | 43       | 22       | 6.40       |     |
| 451X6B | F 238         |            | 35         | 36         | 32       | 22       | 6.40       |     |
| 451X6  | F 238         |            | 25         | 35         | 38       | 22       | 6.40       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 239         |            | 3          | 2          | 6        | 8        | 6.43       |     |
| 451X6B | F 239         |            | 4          | 7          | 12       | 8        | 6.43       |     |
| 451X6  | F 239         |            | 3          | 5          | 9        | 8        | 6.43       |     |
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | H 341         |            | 13         | 14         | 12       | 8        | 5.27       |     |
| 451X6B | H 341         |            | 0          | 0          | 3        | 8        | 5.27       |     |
| 451X6  | H 341         |            | 8          | 7          | 8        | 8        | 5.27       |     |
| 451X6A | H 342         |            | 5          | 3          | 7        | 3        | 5.16       |     |
| 451X6B | H 342         |            | 0          | 0          | 3        | 3        | 5.16       |     |
| 451X6  | H 342         |            | 3          | 4          | 5        | 3        | 5.16       |     |
| 451X6A | H 343         |            | 16         | 16         | 12       | 6        | 5.17       |     |
| 451X6B | H 343         |            | 0          | 2          | 4        | 6        | 5.17       |     |
| 451X6  | H 343         |            | 9          | 9          | 8        | 6        | 5.17       |     |
| 451X6A | H 344         |            | 13         | 17         | 16       | 6        | 5.18       |     |
| 451X6B | H 344         |            | 0          | 2          | 3        | 6        | 5.18       |     |
| 451X6  | H 344         |            | 8          | 10         | 10       | 6        | 5.18       |     |
| 451X6A | H 345         |            | 13         | 16         | 14       | 7        | 5.14       |     |
| 451X6B | H 345         |            | 0          | 0          | 3        | 7        | 5.14       |     |
| 451X6  | H 345         |            | 8          | 8          | 8        | 7        | 5.14       |     |
| 451X6A | H 346         |            | 5          | 8          | 10       | 5        | 5.35       |     |
| 451X6B | H 346         |            | 0          | 1          | 2        | 5        | 5.35       |     |
| 451X6  | H 346         |            | 3          | 5          | 6        | 5        | 5.35       |     |
| 451X6A | H 347         |            | 5          | 6          | 8        | 4        | 4.96       |     |
| 451X6B | H 347         |            | 0          | 0          | 1        | 4        | 4.96       |     |
| 451X6  | H 347         |            | 3          | 3          | 5        | 4        | 4.96       |     |
| 451X6A | H 348         |            | 0          | 2          | 4        | 2        | 5.43       |     |
| 451X6B | H 348         |            | 0          | 0          | 1        | 2        | 5.43       |     |
| 451X6  | H 348         |            | 0          | 1          | 3        | 2        | 5.43       |     |
| 451X6A | H 349         |            | 8          | 7          | 10       | 5        | 5.13       |     |
| 451X6B | H 349         |            | 4          | 1          | 2        | 5        | 5.13       |     |
| 451X6  | H 349         |            | 6          | 4          | 6        | 5        | 5.13       |     |
| 451X6A | H 350         |            | 8          | 6          | 5        | 3        | 5.26       |     |
| 451X6B | H 350         |            | 0          | 0          | 2        | 3        | 5.26       |     |
| 451X6  | H 350         |            | 5          | 3          | 4        | 3        | 5.26       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | H 351         |            | 8          | 8          | 7        | 3        | 5.50       |     |
| 451X6B | H 351         |            | 0          | 0          | 3        | 3        | 5.50       |     |
| 451X6  | H 351         |            | 5          | 4          | 5        | 3        | 5.50       |     |
| 451X6A | H 352         |            | 3          | 4          | 8        | 5        | 4.84       |     |
| 451X6B | H 352         |            | 0          | 0          | 1        | 5        | 4.84       |     |
| 451X6  | H 352         |            | 2          | 2          | 5        | 5        | 4.84       |     |
| 451X6A | H 353         |            | 5          | 4          | 8        | 4        | 5.85       |     |
| 451X6B | H 353         |            | 0          | 0          | 1        | 4        | 5.85       |     |
| 451X6  | H 353         |            | 3          | 2          | 5        | 4        | 5.85       |     |
| 451X6A | H 354         |            | 11         | 12         | 11       | 6        | 5.69       |     |
| 451X6B | H 354         |            | 0          | 0          | 3        | 6        | 5.69       |     |
| 451X6  | H 354         |            | 6          | 6          | 8        | 6        | 5.69       |     |
| 451X6A | H 355         |            | 8          | 4          | 6        | 3        | 5.81       |     |
| 451X6B | H 355         |            | 0          | 0          | 2        | 3        | 5.81       |     |
| 451X6  | H 355         |            | 5          | 2          | 4        | 3        | 5.81       |     |
| 451X6A | H 356         |            | 11         | 13         | 10       | 3        | 5.71       |     |
| 451X6B | H 356         |            | 4          | 1          | 3        | 3        | 5.71       |     |
| 451X6  | H 356         |            | 8          | 7          | 6        | 3        | 5.71       |     |
| 451X6A | H 357         |            | 3          | 2          | 5        | 3        | 5.83       |     |
| 451X6B | H 357         |            | 0          | 0          | 2        | 3        | 5.83       |     |
| 451X6  | H 357         |            | 2          | 1          | 3        | 3        | 5.83       |     |
| 451X6A | H 358         |            | 11         | 7          | 5        | 3        | 5.83       |     |
| 451X6B | H 358         |            | 0          | 0          | 2        | 3        | 5.83       |     |
| 451X6  | H 358         |            | 6          | 3          | 4        | 3        | 5.83       |     |
| 451X6A | H 359         |            | 3          | 7          | 6        | 3        | 5.76       |     |
| 451X6B | H 359         |            | 0          | 1          | 3        | 3        | 5.76       |     |
| 451X6  | H 359         |            | 2          | 4          | 4        | 3        | 5.76       |     |
| 451X6A | H 360         |            | 13         | 12         | 10       | 4        | 4.51       |     |
| 451X6B | H 360         |            | 0          | 0          | 2        | 4        | 4.51       |     |
| 451X6  | H 360         |            | 8          | 6          | 6        | 4        | 4.51       |     |
| 451X6A | H 361         |            | 13         | 10         | 10       | 5        | 5.47       |     |
| 451X6B | H 361         |            | 0          | 0          | 2        | 5        | 5.47       |     |
| 451X6  | H 361         |            | 8          | 5          | 6        | 5        | 5.47       |     |
| 451X6A | H 362         |            | 11         | 11         | 10       | 6        | 6.01       |     |
| 451X6B | H 362         |            | 0          | 1          | 2        | 6        | 6.01       |     |
| 451X6  | H 362         |            | 6          | 6          | 6        | 6        | 6.01       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | H 363         |            | 0          | 0          | 1        | 0        | 5.72       |     |
| 451X6B | H 363         |            | 0          | 0          | 0        | 0        | 5.72       |     |
| 451X6  | H 363         |            | 0          | 0          | 1        | 0        | 5.72       |     |
| 451X6A | H 364         |            | 3          | 3          | 6        | 2        | 6.44       |     |
| 451X6B | H 364         |            | 0          | 1          | 1        | 2        | 6.44       |     |
| 451X6  | H 364         |            | 2          | 2          | 4        | 2        | 6.44       |     |
| 451X6A | H 365         |            | 11         | 8          | 9        | 5        | 6.56       |     |
| 451X6B | H 365         |            | 0          | 0          | 2        | 5        | 6.56       |     |
| 451X6  | H 365         |            | 6          | 4          | 6        | 5        | 6.56       |     |
| 451X6A | H 366         |            | 16         | 10         | 9        | 5        | 6.65       |     |
| 451X6B | H 366         |            | 0          | 1          | 2        | 5        | 6.65       |     |
| 451X6  | H 366         |            | 9          | 6          | 5        | 5        | 6.65       |     |
| 451X6A | H 367         |            | 0          | 2          | 4        | 2        | 6.40       |     |
| 451X6B | H 367         |            | 0          | 0          | 0        | 2        | 6.40       |     |
| 451X6  | H 367         |            | 0          | 1          | 2        | 2        | 6.40       |     |
| 451X6A | H 368         |            | 8          | 7          | 9        | 5        | 6.41       |     |
| 451X6B | H 368         |            | 0          | 0          | 2        | 5        | 6.41       |     |
| 451X6  | H 368         |            | 5          | 3          | 6        | 5        | 6.41       |     |
| 451X6A | H 369         |            | 0          | 3          | 6        | 3        | 6.50       |     |
| 451X6B | H 369         |            | 0          | 0          | 0        | 3        | 6.50       |     |
| 451X6  | H 369         |            | 0          | 2          | 3        | 3        | 6.50       |     |
| 451X6A | H 370         |            | 18         | 12         | 12       | 7        | 6.24       |     |
| 451X6B | H 370         |            | 0          | 0          | 2        | 7        | 6.24       |     |
| 451X6  | H 370         |            | 11         | 6          | 7        | 7        | 6.24       |     |
| 451X6A | H 371         |            | 8          | 7          | 10       | 5        | 6.32       |     |
| 451X6B | H 371         |            | 0          | 0          | 2        | 5        | 6.32       |     |
| 451X6  | H 371         |            | 5          | 3          | 6        | 5        | 6.32       |     |
| 451X6A | H 372         |            | 3          | 8          | 7        | 2        | 6.46       |     |
| 451X6B | H 372         |            | 0          | 0          | 1        | 2        | 6.46       |     |
| 451X6  | H 372         |            | 2          | 4          | 4        | 2        | 6.46       |     |
| 451X6A | H 373         |            | 18         | 13         | 12       | 7        | 6.67       |     |
| 451X6B | H 373         |            | 0          | 1          | 2        | 7        | 6.67       |     |
| 451X6  | H 373         |            | 11         | 7          | 7        | 7        | 6.67       |     |
| 451X6A | H 374         |            | 5          | 4          | 8        | 5        | 6.10       |     |
| 451X6B | H 374         |            | 0          | 0          | 2        | 5        | 6.10       |     |
| 451X6  | H 374         |            | 3          | 2          | 5        | 5        | 6.10       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | H 375         |            | 0          | 1          | 2        | 1        | 6.28       |     |
| 451X6B | H 375         |            | 0          | 0          | 0        | 1        | 6.28       |     |
| 451X6  | H 375         |            | 0          | 1          | 1        | 1        | 6.28       |     |
| 451X6A | H 376         |            | 11         | 9          | 6        | 2        | 6.60       |     |
| 451X6B | H 376         |            | 0          | 0          | 2        | 2        | 6.60       |     |
| 451X6  | H 376         |            | 6          | 5          | 4        | 2        | 6.60       |     |
| 451X6A | H 377         |            | 0          | 0          | 2        | 2        | 7.25       |     |
| 451X6B | H 377         |            | 0          | 0          | 2        | 2        | 7.25       |     |
| 451X6  | H 377         |            | 0          | 0          | 2        | 2        | 7.25       |     |
| 451X6A | H 378         |            | 8          | 7          | 7        | 4        | 6.27       |     |
| 451X6B | H 378         |            | 0          | 1          | 2        | 4        | 6.27       |     |
| 451X6  | H 378         |            | 5          | 4          | 5        | 4        | 6.27       |     |
| 451X6A | H 379         |            | 24         | 17         | 13       | 6        | 6.82       |     |
| 451X6B | H 379         |            | 0          | 2          | 2        | 6        | 6.82       |     |
| 451X6  | H 379         |            | 14         | 10         | 8        | 6        | 6.82       |     |
| 451X6A | H 380         |            | 3          | 2          | 6        | 5        | 6.30       |     |
| 451X6B | H 380         |            | 0          | 0          | 1        | 5        | 6.30       |     |
| 451X6  | H 380         |            | 2          | 1          | 4        | 5        | 6.30       |     |
| 451X6A | H 381         |            | 3          | 3          | 6        | 3        | 6.25       |     |
| 451X6B | H 381         |            | 0          | 0          | 1        | 3        | 6.25       |     |
| 451X6  | H 381         |            | 2          | 2          | 4        | 3        | 6.25       |     |
| 451X6A | H 382         |            | 13         | 8          | 8        | 4        | 5.07       |     |
| 451X6B | H 382         |            | 0          | 1          | 1        | 4        | 5.07       |     |
| 451X6  | H 382         |            | 8          | 5          | 5        | 4        | 5.07       |     |
| 451X6A | H 383         |            | 3          | 4          | 6        | 2        | 6.29       |     |
| 451X6B | H 383         |            | 0          | 0          | 1        | 2        | 6.29       |     |
| 451X6  | H 383         |            | 2          | 2          | 4        | 2        | 6.29       |     |
| 451X6A | H 384         |            | 3          | 4          | 4        | 1        | 5.77       |     |
| 451X6B | H 384         |            | 0          | 0          | 1        | 1        | 5.77       |     |
| 451X6  | H 384         |            | 2          | 2          | 2        | 1        | 5.77       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 225 ISOLATE MALFUNCTIONS IN COMPUTER TERMINALS  
 F 227 ISOLATE MALFUNCTIONS IN DISK DRIVES  
 F 230 ISOLATE MALFUNCTIONS IN HIGH VOLTAGE POWER SUPPLIES  
 F 231 ISOLATE MALFUNCTIONS IN LOW VOLTAGE POWER SUPPLIES  
 F 237 ISOLATE MALFUNCTIONS TO COMPUTER TERMINALS  
 F 238 ISOLATE MALFUNCTIONS TO CORDWOOD MODULES OR CIRCUIT CARDS  
 F 239 ISOLATE MALFUNCTIONS TO DISK DRIVES  
 F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES

# **USAF JOB INVENTORY TASK STATEMENTS:**

H 341 ISOLATE MALFUNCTIONS TO AC AUXILIARY POWER SUPPLIES  
H 342 ISOLATE MALFUNCTIONS TO CONTINUOUS WAVE (CW) POWER METERS  
H 343 ISOLATE MALFUNCTIONS TO DC AUXILIARY POWER SUPPLIES  
H 344 ISOLATE MALFUNCTIONS TO DC PROGRAMMABLE POWER SUPPLIES  
H 345 ISOLATE MALFUNCTIONS TO DIGITAL MULTIMETERS  
H 346 ISOLATE MALFUNCTIONS TO DIGITAL WORD GENERATOR POWER  
SUPPLIES  
H 347 ISOLATE MALFUNCTIONS TO DISPLAY TERMINALS  
H 348 ISOLATE MALFUNCTIONS TO GRAPHIC DISPLAY TEST ASSEMBLIES  
H 349 ISOLATE MALFUNCTIONS TO KEYBOARDS  
H 350 ISOLATE MALFUNCTIONS TO MICROWAVE PULSE COUNTERS  
H 351 ISOLATE MALFUNCTIONS TO PEAK POWER METERS  
H 352 ISOLATE MALFUNCTIONS TO PRINTERS  
H 353 ISOLATE MALFUNCTIONS TO PROGRAMMABLE SYNCHRO/RESOLVER  
SIMULATORS  
H 354 ISOLATE MALFUNCTIONS TO PULSE GENERATORS  
H 355 ISOLATE MALFUNCTIONS TO SCALER NETWORK ANALYZERS  
H 356 ISOLATE MALFUNCTIONS TO SPECTRUM ANALYZERS  
H 357 ISOLATE MALFUNCTIONS TO SYNTHESIZED SIGNAL GENERATORS  
H 358 ISOLATE MALFUNCTIONS TO SYNTHESIZED SWEEPERS  
H 359 ISOLATE MALFUNCTIONS TO TRAVELING WAVE TUBE AMPLIFIERS  
H 360 ISOLATE MALFUNCTIONS TO UNIT UNDER TEST (UUT) BLOWERS  
H 361 ISOLATE MALFUNCTIONS TO WAVEFORM ANALYZERS  
H 362 ISOLATE MALFUNCTIONS WITHIN AC PROGRAMMABLE POWER SUPPLIES  
H 363 ISOLATE MALFUNCTIONS WITHIN ANTENNA COUPLER/LOAD CART  
ASSEMBLIES  
H 364 ISOLATE MALFUNCTIONS WITHIN ATSCSs  
H 365 ISOLATE MALFUNCTIONS WITHIN DIGITAL WORD GENERATOR  
CONTROLLERS  
H 366 ISOLATE MALFUNCTIONS WITHIN DIGITAL WORD GENERATORS  
H 367 ISOLATE MALFUNCTIONS WITHIN DISPLAY TEST ASSEMBLIES  
H 368 ISOLATE MALFUNCTIONS WITHIN DISTRIBUTED PROCESSORS  
H 369 ISOLATE MALFUNCTIONS WITHIN GYRO ACCELEROMETER TEST  
ASSEMBLIES  
H 370 ISOLATE MALFUNCTIONS WITHIN INTERFACE TEST ADAPTERS  
H 371 ISOLATE MALFUNCTIONS WITHIN LOAD DRAWERS  
H 372 ISOLATE MALFUNCTIONS WITHIN MICROWAVE TEST ASSEMBLIES  
H 373 ISOLATE MALFUNCTIONS WITHIN MULTIFUNCTION UNITS  
H 374 ISOLATE MALFUNCTIONS WITHIN POWER CONTROL MONITORS (PCM)  
H 375 ISOLATE MALFUNCTIONS WITHIN PRESSURE SIMULATOR SYSTEMS  
H 376 ISOLATE MALFUNCTIONS WITHIN RF INTERFACE ADAPTERS  
H 377 ISOLATE MALFUNCTIONS WITHIN SEL COMPUTERS  
H 378 ISOLATE MALFUNCTIONS WITHIN SIA POWER SUPPLIES  
H 379 ISOLATE MALFUNCTIONS WITHIN SIAs  
H 380 ISOLATE MALFUNCTIONS WITHIN TAPE DISK DRIVE ASSEMBLIES  
H 381 ISOLATE MALFUNCTIONS WITHIN UNIVERSAL COUNTERS  
H 382 ISOLATE MALFUNCTIONS WITHIN UUT BLOWERS  
H 383 ISOLATE MALFUNCTIONS WITHIN WAVEFORM ANALYZERS  
H 384 ISOLATE MALFUNCTIONS WITHIN WAVEGUIDE PRESSURIZATION  
ASSEMBLIES

**TASK NUMBER:** 60200

**TASK STATEMENT:**

REPAIR AIS/R TEST STATIONS

**TASK NOTES:**

PMEL REPAIRS THE ATSCS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

ATSCS  
CLEANING SOLVENTS AND BRUSHES  
CTK  
CW POWER METER  
DIGITAL MULTIMETER  
ESD PROTECTIVE EQUIPMENT  
ESS  
FREQUENCY COUNTER  
OSCILLOSCOPE  
PEAK POWER METER  
RF PULSE GENERATOR  
SCALER NETWORK ANALYZER  
SPECTRUM ANALYZER  
SYNCH SWEEPER

**REFERENCES:**

APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
33AA43-13-1  
33DA-122-4-1 (EES)

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN DISK DRIVE POWER SUPPLY (FLOATING CAMBOLT SCREWS)  
A ALIGN TRUs  
A CALIBRATE TEST STATIONS  
A CLEAN CONTACTS (F 210)  
A ORDER PARTS  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)

**ACTIVITIES:**

A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)  
A REMOVE AND REPLACE TRUs (TASK NUMBER: 61380)  
A REPAIR WIRING (TASK NUMBER: 61440)  
A RESEAT SRUs

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S INSTALL EXTENDER BOARDS  
S OPERATE TEST STATION  
S USE ATSCS TO CALIBRATE TEST STATION  
S USE COMMON HANDTOOLS  
S USE CW POWER METER  
S USE DIGITAL MULTIMETER TO CHECK VOLTAGES  
S USE ESS TO ADJUST TRUs (WHEN ALIGNMENT IS NOT POSSIBLE WITH TEST STATION)  
S USE FREQUENCY COUNTER TO CHECK FREQUENCY OF SIGNAL  
S USE OSCILLOSCOPE TO CHECK WAVEFORMS AND PULSE PERIODS  
S USE PEAK POWER METER TO READ PEAK POWER OF WAVEFORM  
S USE RF PULSE GENERATOR TO SET UP SQUARE WAVE (RF)  
S USE SCALER NETWORK ANALYZER TO READ SWEEPER FREQUENCY  
S USE SPECTRUM ANALYZER TO SET UP FREQUENCY RANGE AND POWER OUTPUT  
S USE SYNCH SWEEPER TO READ SWEEPER FREQUENCY

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY ESD PRECAUTIONS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SCIENTIFIC NOTATION  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 198         |            | 13         | 11         | 11       | 10       | 4.97       |     |
| 451X6B | F 198         |            | 12         | 7          | 12       | 10       | 4.97       |     |
| 451X6  | F 198         |            | 12         | 9          | 12       | 10       | 4.97       |     |
| 451X6A | F 199         |            | 0          | 0          | 3        | 5        | 6.50       |     |
| 451X6B | F 199         |            | 15         | 11         | 13       | 5        | 6.50       |     |
| 451X6  | F 199         |            | 6          | 6          | 8        | 5        | 6.50       |     |
| 451X6A | F 201         |            | 47         | 53         | 55       | 36       | 4.92       |     |
| 451X6B | F 201         |            | 65         | 55         | 61       | 36       | 4.92       |     |
| 451X6  | F 201         |            | 54         | 54         | 58       | 36       | 4.92       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 202         |            | 47         | 58         | 65       | 40       | 4.64       |     |
| 451X6B | F 202         |            | 62         | 58         | 64       | 40       | 4.64       |     |
| 451X6  | F 202         |            | 52         | 57         | 65       | 40       | 4.64       |     |
| 451X6A | F 203         |            | 13         | 18         | 26       | 23       | 5.34       |     |
| 451X6B | F 203         |            | 35         | 34         | 34       | 23       | 5.34       |     |
| 451X6  | F 203         |            | 22         | 25         | 30       | 23       | 5.34       |     |
| 451X6A | F 204         |            | 3          | 6          | 11       | 14       | 5.47       |     |
| 451X6B | F 204         |            | 23         | 19         | 29       | 14       | 5.47       |     |
| 451X6  | F 204         |            | 11         | 12         | 19       | 14       | 5.47       |     |
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | H 322         |            | 11         | 9          | 10       | 6        | 5.27       |     |
| 451X6B | H 322         |            | 0          | 2          | 4        | 6        | 5.27       |     |
| 451X6  | H 322         |            | 6          | 6          | 7        | 6        | 5.27       |     |
| 451X6A | H 323         |            | 11         | 9          | 10       | 6        | 5.35       |     |
| 451X6B | H 323         |            | 0          | 2          | 2        | 6        | 5.35       |     |
| 451X6  | H 323         |            | 6          | 6          | 6        | 6        | 5.35       |     |
| 451X6A | H 324         |            | 0          | 0          | 4        | 2        | 5.79       |     |
| 451X6B | H 324         |            | 0          | 1          | 0        | 2        | 5.79       |     |
| 451X6  | H 324         |            | 0          | 1          | 3        | 2        | 5.79       |     |
| 451X6A | H 325         |            | 3          | 1          | 3        | 0        | 5.31       |     |
| 451X6B | H 325         |            | 0          | 0          | 0        | 0        | 5.31       |     |
| 451X6  | H 325         |            | 2          | 1          | 1        | 0        | 5.31       |     |
| 451X6A | H 326         |            | 11         | 10         | 11       | 5        | 5.21       |     |
| 451X6B | H 326         |            | 0          | 4          | 3        | 5        | 5.21       |     |
| 451X6  | H 326         |            | 6          | 7          | 7        | 5        | 5.21       |     |
| 451X6A | H 327         |            | 18         | 16         | 12       | 7        | 4.98       |     |
| 451X6B | H 327         |            | 0          | 4          | 3        | 7        | 4.98       |     |
| 451X6  | H 327         |            | 11         | 10         | 8        | 7        | 4.98       |     |
| 451X6A | H 328         |            | 5          | 4          | 7        | 3        | 5.26       |     |
| 451X6B | H 328         |            | 0          | 2          | 1        | 3        | 5.26       |     |
| 451X6  | H 328         |            | 3          | 3          | 4        | 3        | 5.26       |     |
| 451X6A | H 329         |            | 5          | 2          | 4        | 2        | 5.33       |     |
| 451X6B | H 329         |            | 0          | 1          | 0        | 2        | 5.33       |     |
| 451X6  | H 329         |            | 3          | 2          | 2        | 2        | 5.33       |     |

# RELATED OCCUPATIONAL SURVEY DATA:

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | H 330         |            | 3          | 1          | 3        | 2        | 5.74       |     |
| 451X6B | H 330         |            | 0          | 0          | 0        | 2        | 5.74       |     |
| 451X6  | H 330         |            | 2          | 1          | 1        | 2        | 5.74       |     |
| 451X6A | H 331         |            | 0          | 3          | 4        | 0        | 6.00       |     |
| 451X6B | H 331         |            | 0          | 1          | 1        | 0        | 6.00       |     |
| 451X6  | H 331         |            | 0          | 2          | 3        | 0        | 6.00       |     |
| 451X6A | H 332         |            | 8          | 6          | 6        | 4        | 5.16       |     |
| 451X6B | H 332         |            | 0          | 4          | 2        | 4        | 5.16       |     |
| 451X6  | H 332         |            | 5          | 5          | 4        | 4        | 5.16       |     |
| 451X6A | H 333         |            | 0          | 1          | 6        | 2        | 5.43       |     |
| 451X6B | H 333         |            | 0          | 2          | 1        | 2        | 5.43       |     |
| 451X6  | H 333         |            | 0          | 2          | 4        | 2        | 5.43       |     |
| 451X6A | H 334         |            | 5          | 3          | 7        | 4        | 5.93       |     |
| 451X6B | H 334         |            | 0          | 0          | 1        | 4        | 5.93       |     |
| 451X6  | H 334         |            | 3          | 2          | 4        | 4        | 5.93       |     |
| 451X6A | H 336         |            | 0          | 3          | 7        | 3        | 7.13       |     |
| 451X6B | H 336         |            | 0          | 1          | 2        | 3        | 7.13       |     |
| 451X6  | H 336         |            | 0          | 2          | 5        | 3        | 7.13       |     |
| 451X6A | H 337         |            | 0          | 1          | 4        | 3        | 7.26       |     |
| 451X6B | H 337         |            | 0          | 1          | 1        | 3        | 7.26       |     |
| 451X6  | H 337         |            | 0          | 1          | 3        | 3        | 7.26       |     |
| 451X6A | H 338         |            | 0          | 1          | 5        | 2        | 7.01       |     |
| 451X6B | H 338         |            | 0          | 1          | 2        | 2        | 7.01       |     |
| 451X6  | H 338         |            | 0          | 1          | 4        | 2        | 7.01       |     |
| 451X6A | H 339         |            | 0          | 4          | 5        | 2        | 7.10       |     |
| 451X6B | H 339         |            | 0          | 2          | 2        | 2        | 7.10       |     |
| 451X6  | H 339         |            | 0          | 3          | 4        | 2        | 7.10       |     |

## USAF JOB INVENTORY TASK STATEMENTS:

F 198 ADJUST PRINTERS  
 F 199 ALIGN DISK DRIVES  
 F 201 ALIGN HIGH VOLTAGE POWER SUPPLIES  
 F 202 ALIGN LOW VOLTAGE POWER SUPPLIES  
 F 203 ALIGN PULSE GENERATORS  
 F 204 ALIGN PUNCH TAPE READERS  
 F 210 CLEAN CONTACTS  
 H 322 ALIGN ALTERNATING CURRENT (AC) AUXILIARY POWER SUPPLIES  
 H 323 ALIGN AC PROGRAMMABLE POWER SUPPLIES  
 H 324 ALIGN AND CALIBRATE GYRO ACCELEROMETER TEST ASSEMBLIES  
 H 325 ALIGN ANTENNA COUPLER-LOAD CART ASSEMBLIES  
 H 326 ALIGN DIRECT CURRENT (DC) AUXILIARY POWER SUPPLIES

**USAF JOB INVENTORY TASK STATEMENTS:**

H 327 ALIGN DC PROGRAMMABLE POWER SUPPLIES  
H 328 ALIGN DIGITAL WORD GENERATOR POWER SUPPLIES  
H 329 ALIGN DISPLAY TERMINALS  
H 330 ALIGN DISPLAY TEST ASSEMBLIES  
H 331 ALIGN MICROWAVE TEST ASSEMBLIES  
H 332 ALIGN SWITCHING INTERFACE ASSEMBLIES (SIA) POWER SUPPLIES  
H 333 ALIGN UNIVERSAL COUNTERS  
H 334 ALIGN WAVEFORM ANALYZERS  
H 336 CALIBRATE AVIONIC INTERMEDIATE SHOP/REPLACEMENT (AIS/R)  
COMPUTER TEST STATIONS USING ATSCS  
H 337 CALIBRATE AIS/R ELECTRONIC WARFARE (EW) TEST STATIONS USING  
AUTOMATIC TEST SET CALIBRATION SETS (ATSCS)  
H 338 CALIBRATE AIS/R VIDEO TEST STATIONS USING ATSCS<sub>s</sub>  
H 339 CALIBRATE RADIO FREQUENCY (RF) TEST STATIONS USING ATSCS<sub>s</sub>

**TASK NUMBER:** 60210

**TASK STATEMENT:** .

PERFORM MAGNETIC TAPE LOADS OF AIS/R PROGRAMS (H 390)

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

TAPE  
TEST STATION

**REFERENCES:**

APPLICABLE TEST STATION SOFTWARE TO  
APPLICABLE SHOP SYSTEM TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

**CUES:**

RECEIPT OF NEW OR REVISED PROGRAM

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A INITIATE COMMANDS  
A INITIATE LOAD

**SKILLS:**

S LOAD TAPE  
S OPERATE TEST STATION

**KNOWLEDGE:**

K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | H 390         |            | 0          | 1          | 5        | 3        | 4.15       |     |
| 451X6B | H 390         |            | 0          | 2          | 2        | 3        | 4.15       |     |
| 451X6  | H 390         |            | 0          | 2          | 4        | 3        | 4.15       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

H 390 PERFORM MAGNETIC TAPE LOADS OF AIS/R PROGRAMS

**TASK NUMBER:** 60220

**TASK STATEMENT:**

PERFORM PERIODIC INSPECTIONS ON AIS/R TEST STATIONS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING RAGS  
CLEANING SOLVENT AND BRUSHES  
CTK  
Q-TIPS

**REFERENCES:**

APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CALIBRATE TEST STATION  
A CLEAN CONTACTS (F 210)  
A CLEAN MAGNETIC TAPE HEADS (H 340)  
A CLEAN TEST STATION BLOWERS AND FILTERS (F 219)  
A CLEAN WORK SURFACE  
A ORDER PARTS  
A PERFORM CONFIDENCE TESTS OF AIS/R TEST STATIONS (TASK NUMBER: 60150)  
A PERFORM DIAGNOSTIC CHECK OF SEL COMPUTER (TASK NUMBER: 60180)  
A PERFORM OA/FI TEST OF AIS/R TEST STATIONS (TASK NUMBER: 60160)  
A PERFORM SELF TEST OF PCM (H 395)  
A VISUALLY INSPECT HARDWARE, WIRING, LIGHTS, KNOBS, ETC

**SKILLS:**

S OPERATE TEST STATION  
S USE ATSCS TO CALIBRATE TEST STATION  
S USE COMMON HANDTOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 219         |            | 89         | 88         | 82       | 45       | 2.78       |     |
| 451X6B | F 219         |            | 85         | 85         | 78       | 45       | 2.78       |     |
| 451X6  | F 219         |            | 86         | 85         | 80       | 45       | 2.78       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | H 340         |            | 16         | 12         | 11       | 5        | 3.01       |     |
| 451X6B | H 340         |            | 0          | 0          | 3        | 5        | 3.01       |     |
| 451X6  | H 340         |            | 9          | 6          | 7        | 5        | 3.01       |     |
| 451X6A | H 395         |            | 16         | 9          | 8        | 7        | 3.95       |     |
| 451X6B | H 395         |            | 0          | 2          | 2        | 7        | 3.95       |     |
| 451X6  | H 395         |            | 9          | 6          | 5        | 7        | 3.95       |     |
| 451X6A | H 396         |            | 8          | 4          | 5        | 3        | 3.71       |     |
| 451X6B | H 396         |            | 0          | 0          | 1        | 3        | 3.71       |     |
| 451X6  | H 396         |            | 5          | 2          | 3        | 3        | 3.71       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
F 219 INSPECT AND CLEAN TEST STATION BLOWERS AND FILTERS  
F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
LINE REPLACEABLE UNITS (LRU)  
H 340 CLEAN MAGNETIC TAPE HEADS  
H 395 PERFORM SELF TESTS OF POWER CONTROL MONITORS  
H 396 PERFORM SELF TESTS OF PRINTERS

**TASK NUMBER:** 60230

**TASK STATEMENT:**

MAINTAIN INERTIAL TEST SET

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
CLEANING SOLVENTS AND BRUSHES  
MULTIMETER  
SOLDERING STATION

**REFERENCES:**

APPLICABLE TEST SET TO

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN ITS (I 414)  
A CLEAN CONTACTS (F 210)  
A ISOLATE MALFUNCTIONS IN ITS (I 421)  
A ORDER PARTS  
A REMOVE AND REPLACE ITS (I 435)  
A REMOVE AND REPLACE ITS COMPONENTS (I 434)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER 61410)

**SKILLS:**

S OPERATE ITS  
S PERFORM VISUAL INSPECTIONS  
S SOLDER OR DESOLDER PC BOARDS  
S SOLDER OR DESOLDER TERMINAL CONNECTIONS  
S USE COMMON HANDTOOLS  
S USE MULTIMETER

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**KNOWLEDGE:**

K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION  
PROCEDURES (F 278)  
K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | I 414         |            | 3          | 3          | 6        | 1        | 6.06       |     |
| 451X6B | I 414         |            | 0          | 0          | 0        | 1        | 6.06       |     |
| 451X6  | I 414         |            | 2          | 2          | 3        | 1        | 6.06       |     |
| 451X6A | I 421         |            | 0          | 2          | 5        | 1        | 6.39       |     |
| 451X6B | I 421         |            | 0          | 0          | 0        | 1        | 6.39       |     |
| 451X6  | I 421         |            | 0          | 1          | 3        | 1        | 6.39       |     |
| 451X6A | I 434         |            | 0          | 1          | 5        | 1        | 4.80       |     |
| 451X6B | I 434         |            | 0          | 0          | 0        | 1        | 4.80       |     |
| 451X6  | I 434         |            | 0          | 1          | 3        | 1        | 4.80       |     |
| 451X6A | I 435         |            | 0          | 1          | 4        | 0        | 4.64       |     |
| 451X6B | I 435         |            | 0          | 0          | 0        | 0        | 4.64       |     |
| 451X6  | I 435         |            | 0          | 1          | 2        | 0        | 4.64       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
I 414 ALIGN INERTIAL TEST SETS (ITS)  
I 421 ISOLATE MALFUNCTIONS IN ITSs  
I 434 REMOVE OR REPLACE ITs COMPONENTS  
I 435 REMOVE OR REPLACE ITSs

**TASK NUMBER:** 60240

**TASK STATEMENT:**

MAINTAIN INS DTS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

ANGLE POSITION INDICATOR  
CLEANING SOLVENTS AND BRUSHES  
CTK  
ESD PROTECTIVE EQUIPMENT  
MULTIMETER  
OSCILLOSCOPE  
SOLDERING STATION

**REFERENCES:**

5N1-3-17-2  
5N1-3-17-48-1  
5N1-4-15-2  
5N1-4-15-3

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN INS DTS (I 413)  
A CLEAN CONTACTS (F 210)  
A ISOLATE MALFUNCTIONS IN INS DTS (I 420)  
A PERFORM MAINTENANCE TEST OF INS DTS (I 426)  
A PERFORM OPERATIONAL TEST OF INS DTS  
A ORDER PARTS  
A REMOVE AND REPLACE CABLES  
A REMOVE AND REPLACE INS DTS COMPONENTS (I 433)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)  
A RESEAT SRUs

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
 S LOAD COMPUTER PROGRAM  
 S LOAD DATE AND TIME  
 S OPERATE DTS  
 S PERFORM VISUAL INSPECTIONS  
 S SOLDER OR DESOLDER COAXIAL CONNECTORS  
 S SOLDER OR DESOLDER MULTIPIN CONNECTORS  
 S SOLDER OR DESOLDER PC BOARDS  
 S SOLDER OR DESOLDER TERMINAL CONNECTIONS  
 S USE ANGLE POSITION INDICATOR  
 S USE COMMON HANDTOOLS  
 S USE MULTIMETER TO MONITOR VOLTAGES  
 S USE OSCILLOSCOPE TO MONITOR VOLTAGES AND PULSES

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY AC CIRCUIT THEORY OF OPERATION  
 K APPLY CMOSs THEORY OF OPERATION  
 K APPLY DC CIRCUIT THEORY OF OPERATION  
 K APPLY ESD PRECAUTIONS  
 K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY SYSTEM THEORY  
 K APPLY TECHNICAL DATA  
 K IDENTIFY UPPER AND LOWER LEVEL RANGE TOLERANCES  
 K ISOLATE FAULTY LIMITER TRANSISTOR CIRCUITS  
 K MONITOR TEST POINTS  
 K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)  
 K TROUBLESHOOT AC CIRCUITS  
 K TROUBLESHOOT DC CIRCUITS  
 K TROUBLESHOOT LIMITER CIRCUIT TRANSISTORS  
 K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | I 413         |            | 5          | 7          | 8        | 5        | 6.35       |     |
| 451X6B | I 413         |            | 0          | 1          | 1        | 5        | 6.35       |     |
| 451X6  | I 413         |            | 3          | 4          | 5        | 5        | 6.35       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | I 420         |            | 0          | 4          | 8        | 2        | 6.65       |     |
| 451X6B | I 420         |            | 0          | 0          | 0        | 2        | 6.65       |     |
| 451X6  | I 420         |            | 0          | 2          | 5        | 2        | 6.65       |     |
| 451X6A | I 426         |            | 0          | 6          | 9        | 5        | 4.92       |     |
| 451X6B | I 426         |            | 0          | 0          | 0        | 5        | 4.92       |     |
| 451X6  | I 426         |            | 0          | 3          | 5        | 5        | 4.92       |     |
| 451X6A | I 433         |            | 0          | 3          | 8        | 3        | 4.64       |     |
| 451X6B | I 433         |            | 0          | 0          | 0        | 3        | 4.64       |     |
| 451X6  | I 433         |            | 0          | 2          | 4        | 3        | 4.64       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
 F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
 I 413 ALIGN INERTIAL NAVIGATION SYSTEM (INS) DTSs  
 I 420 ISOLATE MALFUNCTIONS IN INS DTSs  
 I 426 PERFORM MAINTENANCE TESTS OF INS DTSs  
 I 433 REMOVE OR REPLACE INS DTS COMPONENTS

**TASK NUMBER:** 60250

**TASK STATEMENT:**

MAINTAIN DCC/MCC DTS

**TASK NOTES:**

DCC DTS IS FULLY AUTOMATED

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CALIBRATION STANDARD SET  
CLEANING SOLVENTS AND BRUSHES  
CTK  
DIGITAL LOGIC PROBE  
DIP/IC CLIPS  
ESD PROTECTIVE EQUIPMENT  
IC CHIP REMOVAL TOOL  
IC EXTENDER  
JUMPER LEADS  
LOGIC ANALYZER  
LOGIC PULSER  
MULTIMETER  
OSCILLOSCOPE  
POWER SUPPLY  
TEST LEADS

**REFERENCES:**

33D7-3-247-2-1 (DRAFT)  
33D7-3-247-2-2

**CONDITIONS:**

2 PERSON REQUIREMENT

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN DCC/MCC DTS (I 412)  
A CALIBRATE MCC DTS  
A CLEAN CONTACTS (F 210)  
A ENSURE EXTERNAL POWER CONNECTED

## ACTIVITIES

- A ENSURE TEST SET CONFIGURATION
- A INSTALL LRU
- A ISOLATE MALFUNCTIONS IN DCC/MCC DTS (I 419)
- A ORDER PARTS
- A PERFORM MAINTENANCE TESTS OF DCC/MCC DTSs (I 425)
- A REMOVE AND REPLACE DCC/MCC DTSs (I 432)
- A REMOVE AND REPLACE DTS COMPONENTS
- A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)
- A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)
- A REPAIR WIRING (TASK NUMBER: 61440)
- A RESEAT SRUs

## SKILLS:

- S CONNECT ADAPTER AND CABLES
- S ENTER HEX DATA
- S LOAD COMPUTER PROGRAMS
- S OPERATE DTS
- S PERFORM VISUAL INSPECTIONS
- S USE CALIBRATION STANDARD SET
- S USE COMMON HANDTOOLS
- S USE DIGITAL LOGIC PROBE TO CHECK OUTPUT
- S USE DIP/IC CLIPS
- S USE IC CHIP REMOVAL TOOL
- S USE IC EXTENDER
- S USE JUMPER LEADS
- S USE LOGIC ANALYZER TO CHECK LOGIC POINTS
- S USE LOGIC PULSER
- S USE MULTIMETER TO CHECK VOLTAGE LEVELS AND MONITOR WAVEFORMS
- S USE OSCILLOSCOPE TO CHECK VOLTAGE/TIMING AND TEST POINTS
- S USE POWER SUPPLIES
- S USE TEST LEADS

## KNOWLEDGE:

- K ANNOTATE FORMS
- K APPLY AC CIRCUIT THEORY OF OPERATION
- K APPLY CAPACITOR THEORY OF OPERATION
- K APPLY CMOS THEORY OF OPERATION
- K APPLY COMBINATIONAL LOGIC CIRCUIT THEORY OF OPERATION
- K APPLY COMPUTER PERIPHERAL DEVICE THEORY OF OPERATION
- K APPLY COMPUTER SUBASSEMBLY THEORY OF OPERATION
- K APPLY COMPUTER THEORY OF OPERATION
- K APPLY DC CIRCUIT THEORY OF OPERATION
- K APPLY ESD PRECAUTIONS
- K APPLY FLIP-FLOP THEORY OF OPERATION
- K APPLY INFORMATION PRESENTED ON DISPLAY
- K APPLY INTEGRATED CIRCUIT THEORY OF OPERATION
- K APPLY JFET THEORY OF OPERATION
- K APPLY LED THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION

## KNOWLEDGE:

- K APPLY LIMITER CIRCUIT ZENER DIODE THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT COUNTER THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT REGISTER THEORY OF OPERATION
- K APPLY MAIN LOGIC GATE THEORY OF OPERATION
- K APPLY MOSFET THEORY OF OPERATION
- K APPLY OPERATIONAL AMPLIFIER THEORY OF OPERATION
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY POWER SUPPLY FILTER THEORY OF OPERATION
- K APPLY POWER SUPPLY RECTIFIER THEORY OF OPERATION
- K APPLY POWER SUPPLY THEORY OF OPERATION
- K APPLY RCL CIRCUIT THEORY OF BASIC OPERATION
- K APPLY RELAY THEORY OF OPERATION
- K APPLY RESISTOR THEORY OF OPERATION
- K APPLY SCR THEORY OF OPERATION
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY SOLID STATE DIODE THEORY OF OPERATION
- K APPLY SYNCHRO-SERVO THEORY OF OPERATION
- K APPLY TECHNICAL DATA
- K APPLY THREE-PHASE TRANSFORMER THEORY OF OPERATION
- K APPLY TRANSFORMER THEORY OF OPERATION
- K APPLY TRANSISTOR AMPLIFIER CIRCUIT THEORY OF OPERATION
- K APPLY TTL THEORY OF OPERATION
- K APPLY VOLTAGE REGULATOR THEORY OF OPERATION
- K APPLY WAVESHAPING CIRCUIT THEORY OF OPERATION
- K APPLY ZENER DIODE THEORY OF OPERATION
- K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING
- K ISOLATE FAULTY AC CIRCUITS
- K ISOLATE FAULTY CAPACITORS
- K ISOLATE FAULTY CMOSs
- K ISOLATE FAULTY COMBINATIONAL LOGIC CIRCUITS
- K ISOLATE FAULTY COMPUTER MAJOR UNITS
- K ISOLATE FAULTY COMPUTER PERIPHERAL DEVICES
- K ISOLATE FAULTY COMPUTER SUBASSEMBLIES
- K ISOLATE FAULTY DC CIRCUITS
- K ISOLATE FAULTY FLIP-FLOPS
- K ISOLATE FAULTY INTEGRATED CIRCUITS
- K ISOLATE FAULTY JFETs
- K ISOLATE FAULTY LEDs
- K ISOLATE FAULTY LIMITER CIRCUIT DIODES
- K ISOLATE FAULTY LIMITER CIRCUIT ZENER DIODES
- K ISOLATE FAULTY LIMITER TRANSISTOR CIRCUITS
- K ISOLATE FAULTY LOGIC COUNTERS
- K ISOLATE FAULTY MAIN LOGIC GATES
- K ISOLATE FAULTY MOSFETs
- K ISOLATE FAULTY OPERATIONAL AMPLIFIERS
- K ISOLATE FAULTY POWER SUPPLIES
- K ISOLATE FAULTY POWER SUPPLY FILTERS
- K ISOLATE FAULTY POWER SUPPLY RECTIFIERS
- K ISOLATE FAULTY REGISTER LOGIC CIRCUITS
- K ISOLATE FAULTY RELAYS
- K ISOLATE FAULTY RESISTORS
- K ISOLATE FAULTY SCRs

**KNOWLEDGE:**

K ISOLATE FAULTY SOLID STATE DIODES  
 K ISOLATE FAULTY SYNCHROS-SERVOS  
 K ISOLATE FAULTY TRANSFORMERS  
 K ISOLATE FAULTY TRANSISTOR AMPLIFIER CIRCUITS  
 K ISOLATE FAULTY TTLS  
 K ISOLATE FAULTY VOLTAGE REGULATORS  
 K ISOLATE FAULTY WAVESHAPING CIRCUITS  
 K ISOLATE FAULTY ZENER DIODES  
 K PERFORM BASIC AC CIRCUIT CALCULATIONS  
 K PERFORM BASIC DC CIRCUIT CALCULATIONS  
 K PERFORM BINARY CONVERSIONS  
 K PERFORM HEXADECIMAL CONVERSIONS  
 K PERFORM OCTAL CONVERSIONS  
 K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION  
 PROCEDURES (F 278)  
 K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
 K TROUBLESHOOT AC CIRCUITS  
 K TROUBLESHOOT CMOS LOGIC FAMILIES  
 K TROUBLESHOOT COMBINATIONAL LOGIC CIRCUITS  
 K TROUBLESHOOT COMPUTER PERIPHERAL DEVICES  
 K TROUBLESHOOT DC CIRCUITS  
 K TROUBLESHOOT FLIP-FLOPS  
 K TROUBLESHOOT LIMITER CIRCUIT DIODES  
 K TROUBLESHOOT LIMITER CIRCUIT TRANSISTORS  
 K TROUBLESHOOT LIMITER CIRCUIT ZENER DIODES  
 K TROUBLESHOOT LOGIC COUNTERS  
 K TROUBLESHOOT LOGIC REGISTERS  
 K TROUBLESHOOT MAIN LOGIC GATES  
 K TROUBLESHOOT OPERATIONAL AMPLIFIERS  
 K TROUBLESHOOT RELAYS  
 K TROUBLESHOOT SYNCHROS-SERVOS  
 K TROUBLESHOOT TRANSFORMERS  
 K TROUBLESHOOT TRANSISTOR AMPLIFIER CIRCUITS  
 K TROUBLESHOOT TTL LOGIC FAMILIES  
 K TROUBLESHOOT VOLTAGE REGULATOR  
 K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
 K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | I 412         |            | 3          | 1          | 4        | 2        | 6.52       |     |
| 451X6B | I 412         |            | 0          | 0          | 0        | 2        | 6.52       |     |
| 451X6  | I 412         |            | 2          | 1          | 2        | 2        | 6.52       |     |
| 451X6A | I 419         |            | 0          | 0          | 4        | 3        | 6.84       |     |
| 451X6B | I 419         |            | 0          | 0          | 0        | 3        | 6.84       |     |
| 451X6  | I 419         |            | 0          | 0          | 2        | 3        | 6.84       |     |
| 451X6A | I 425         |            | 0          | 0          | 4        | 2        | 5.26       |     |
| 451X6B | I 425         |            | 0          | 0          | 0        | 2        | 5.26       |     |
| 451X6  | I 425         |            | 0          | 0          | 2        | 2        | 5.26       |     |
| 451X6A | I 432         |            | 0          | 0          | 2        | 1        | 4.42       |     |
| 451X6B | I 432         |            | 0          | 0          | 0        | 1        | 4.42       |     |
| 451X6  | I 432         |            | 0          | 0          | 1        | 1        | 4.42       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
 F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
 I 412 ALIGN DIGITAL COMPUTER COMPLEX (DCC)/MISSION COMPUTER  
       COMPLEX (MCC) DYNAMIC TEST SETS (DTS)  
 I 419 ISOLATE MALFUNCTIONS IN DCC/MCC DTSs  
 I 425 PERFORM MAINTENANCE TESTS OF DCC/MCC DTSs  
 I 432 REMOVE OR REPLACE DCC/MCC DTSs

**TASK NUMBER:** 60260

**TASK STATEMENT:**

MAINTAIN FLIGHTLINE MDL

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES  
COMPUTER SIMULATOR  
CTK  
DIGITAL COMPUTER COMPLEX  
ESD PROTECTIVE EQUIPMENT  
MULTIMETER  
OSCILLOSCOPE

**REFERENCES:**

33DA-112-11-1

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN FLIGHTLINE MDL (F 200)  
A CLEAN CONTACTS (F 210)  
A ISOLATE MALFUNCTIONS IN FLIGHTLINE MDLs (F 228)  
A ORDER PARTS  
A PERFORM OPERATIONAL CHECKS OF FLIGHTLINE MDLs (F 245)  
A REMOVE AND REPLACE FLIGHTLINE MDL COMPONENTS (F 257)  
A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)  
A REPAIR WIRING (TASK NUMBER: 61440)  
A RESEAT SRUs

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S USE COMMON HANDTOOLS  
S USE COMPUTER SIMULATOR  
S USE DIGITAL COMPUTER COMPLEX  
S USE MULTIMETER  
S USE OSCILLOSCOPE

## KNOWLEDGE:

- K ANNOTATE FORMS
- K APPLY AC CIRCUIT THEORY OF OPERATION
- K APPLY CAPACITOR THEORY OF OPERATION
- K APPLY COMPUTER PERIPHERAL DEVICE THEORY OF OPERATION
- K APPLY DC CIRCUIT THEORY OF OPERATION
- K APPLY ESD PRECAUTIONS
- K APPLY FLIP-FLOP THEORY OF OPERATION
- K APPLY INTEGRATED CIRCUIT THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT ZENER DIODE THEORY OF OPERATION
- K APPLY MAIN LOGIC GATE THEORY OF OPERATION
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY POWER SUPPLY THEORY OF OPERATION
- K APPLY RESISTOR THEORY OF OPERATION
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY SOLID STATE DIODE THEORY OF OPERATION
- K APPLY TECHNICAL DATA
- K APPLY TRANSISTOR AMPLIFIER COUPLING CIRCUIT THEORY OF OPERATION
- K ISOLATE FAULTY AC CIRCUITS
- K ISOLATE FAULTY CAPACITORS
- K ISOLATE FAULTY COMPUTER PERIPHERAL DEVICES
- K ISOLATE FAULTY DC CIRCUITS
- K ISOLATE FAULTY FLIP-FLOPS
- K ISOLATE FAULTY INTEGRATED CIRCUITS
- K ISOLATE FAULTY LIMITER CIRCUIT DIODES
- K ISOLATE FAULTY LIMITER CIRCUIT ZENER DIODES
- K ISOLATE FAULTY LIMITER TRANSISTOR CIRCUITS
- K ISOLATE FAULTY MAIN LOGIC GATES
- K ISOLATE FAULTY POWER SUPPLIES
- K ISOLATE FAULTY RESISTORS
- K ISOLATE FAULTY SOLID STATE DIODES
- K ISOLATE FAULTY TRANSISTOR AMPLIFIER COUPLING CIRCUITS
- K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)
- K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)
- K TROUBLESHOOT AC CIRCUITS
- K TROUBLESHOOT LIMITER CIRCUIT DIODES
- K TROUBLESHOOT LIMITER CIRCUIT TRANSISTORS
- K TROUBLESHOOT LIMITER CIRCUIT ZENER DIODES
- K TROUBLESHOOT POWER SUPPLY CIRCUITS
- K TROUBLESHOOT TRANSISTOR AMPLIFIER COUPLING CIRCUITS
- K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)
- K VERIFY SUSPECTED FAULTY SRUs

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 200         |            | 11         | 8          | 7        | 5        | 5.17       |     |
| 451X6B | F 200         |            | 12         | 6          | 3        | 5        | 5.17       |     |
| 451X6  | F 200         |            | 11         | 7          | 5        | 5        | 5.17       |     |
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 228         |            | 3          | 3          | 6        | 4        | 6.30       |     |
| 451X6B | F 228         |            | 4          | 1          | 2        | 4        | 6.30       |     |
| 451X6  | F 228         |            | 3          | 2          | 4        | 4        | 6.30       |     |
| 451X6A | F 245         |            | 3          | 4          | 7        | 5        | 4.58       |     |
| 451X6B | F 245         |            | 12         | 6          | 3        | 5        | 4.58       |     |
| 451X6  | F 245         |            | 6          | 5          | 5        | 5        | 4.58       |     |
| 451X6A | F 257         |            | 3          | 2          | 6        | 4        | 4.09       |     |
| 451X6B | F 257         |            | 8          | 2          | 2        | 4        | 4.09       |     |
| 451X6  | F 257         |            | 5          | 2          | 4        | 4        | 4.09       |     |
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 200 ALIGN FLIGHTLINE MISSION DATA LOADERS (MDL)  
 F 210 CLEAN CONTACTS  
 F 228 ISOLATE MALFUNCTIONS IN FLIGHTLINE MDLs  
 F 245 PERFORM OPERATIONAL CHECKS OF FLIGHTLINE MDLs  
 F 257 REMOVE OR REPLACE FLIGHTLINE MDL COMPONENTS  
 F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES

**TASK NUMBER:** 60270

**TASK STATEMENT:** .

MAINTAIN TSLVC

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
ESD PROTECTIVE EQUIPMENT  
MCC  
MULTIMETER  
OSCILLOSCOPE  
SOLDERING STATION

**REFERENCES:**

33D7-3-237-1  
5N1-1-168-1

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ISOLATE MALFUNCTIONS IN TSLVC  
A ORDER PARTS  
A PERFORM LOAD  
A PERFORM OPERATIONAL CHECKS OF TSLVC (F 247)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE TSLVC COMPONENTS (F 277)  
A REPAIR RUNS ON BOARDS  
A REPAIR WIRING (TASK NUMBER: 61440)

**SKILLS:**

S OPERATE TSLVC  
S PERFORM VISUAL INSPECTIONS  
S SOLDER OR DESOLDER PC BOARDS  
S USE COMMON HANDTOOLS  
S USE MCC  
S USE MULTIMETER  
S USE OSCILLOSCOPE

## KNOWLEDGE:

- K ANNOTATE FORMS
- K APPLY CAPACITOR THEORY OF OPERATION
- K APPLY CMOSs THEORY OF OPERATION
- K APPLY COMBINATIONAL LOGIC CIRCUIT THEORY OF OPERATION
- K APPLY COMPUTER PERIPHERAL DEVICE THEORY OF OPERATION
- K APPLY DC CIRCUIT THEORY OF OPERATION
- K APPLY ESD PRECAUTIONS
- K APPLY FLIP-FLOP THEORY OF OPERATION
- K APPLY INTEGRATED CIRCUIT THEORY OF OPERATION
- K APPLY LED THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT COUNTER THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT REGISTER THEORY OF OPERATION
- K APPLY MAIN LOGIC GATE THEORY OF OPERATION
- K APPLY MICROPROCESSOR THEORY OF OPERATION
- K APPLY MULTIVIBRATOR CIRCUIT THEORY OF OPERATION
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY OSCILLATOR CIRCUIT THEORY OF OPERATION
- K APPLY RESISTOR THEORY OF OPERATION
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY TECHNICAL DATA
- K APPLY TRANSISTOR AMPLIFIER CIRCUIT THEORY OF OPERATION
- K APPLY TTL THEORY OF OPERATION
- K APPLY TUNNEL DIODE THEORY OF OPERATION
- K APPLY ZENER DIODE THEORY OF OPERATION
- K ISOLATE FAULTY CAPACITORS
- K ISOLATE FAULTY CMOSs
- K ISOLATE FAULTY COMBINATIONAL LOGIC CIRCUITS
- K ISOLATE FAULTY COMPUTER PERIPHERAL DEVICES
- K ISOLATE FAULTY DC CIRCUITS
- K ISOLATE FAULTY FLIP-FLOPS
- K ISOLATE FAULTY INTEGRATED CIRCUITS
- K ISOLATE FAULTY LEDs
- K ISOLATE FAULTY LOGIC COUNTERS
- K ISOLATE FAULTY MAIN LOGIC GATES
- K ISOLATE FAULTY MICROPROCESSORS
- K ISOLATE FAULTY MULTIVIBRATOR CIRCUITS
- K ISOLATE FAULTY OSCILLATOR CIRCUITS
- K ISOLATE FAULTY REGISTER LOGIC CIRCUITS
- K ISOLATE FAULTY RESISTORS
- K ISOLATE FAULTY TRANSISTOR AMPLIFIER CIRCUITS
- K ISOLATE FAULTY TTLS
- K ISOLATE FAULTY TUNNEL DIODES
- K ISOLATE FAULTY ZENER DIODES
- K PERFORM BINARY CONVERSIONS
- K PERFORM BINARY MATH OPERATION
- K PERFORM HEXADECIMAL CONVERSIONS
- K PERFORM HEXADECIMAL MATH OPERATION
- K PERFORM OCTAL CONVERSIONS
- K PERFORM OCTAL MATH OPERATION
- K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)

**KNOWLEDGE:**

K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
K USE METRIC NOTATION  
K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 247         |            | 5          | 3          | 5        | 2        | 4.55       |     |
| 451X6B | F 247         |            | 8          | 2          | 2        | 2        | 4.55       |     |
| 451X6  | F 247         |            | 6          | 3          | 4        | 2        | 4.55       |     |
| 451X6A | F 277         |            | 3          | 1          | 5        | 2        | 4.38       |     |
| 451X6B | F 277         |            | 0          | 0          | 1        | 2        | 4.38       |     |
| 451X6  | F 277         |            | 2          | 1          | 3        | 2        | 4.38       |     |
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 247 PERFORM OPERATIONAL CHECKS OF TEST SET LOADER/VERIFIER  
COMPUTERS (TSLVC)  
F 277 REMOVE OR REPLACE TSLVC COMPONENTS  
F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES

**TASK NUMBER:** 60280

**TASK STATEMENT:**

MAINTAIN FLUID PRESSURIZATION (65AN) FILL STATION

**TASK NOTES:**

USED TO DRAIN AND FILL F-111D ARS TRANSMITTER

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES  
CTK  
FC-40  
LIQUID NITROGEN  
MULTIMETER  
SAFETY EQUIPMENT

**REFERENCES:**

APPLICABLE IPB  
33D7-44-185-1  
12P-22APQ130-2 ARS TRANSMITTER

**CONDITIONS:**

ADEQUATE VENTILATION

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

- A CHECK OIL LEVEL IN VACUUM PUMP
- A CLEAN CONTACTS (F 210)
- A CLEAN TEST STATION BLOWERS AND FILTERS (F 219)
- A DISPOSE OF CONTAINMENTS
- A ISOLATE MALFUNCTIONS IN FLUID PRESSURIZATION (65AN) FILL STATIONS (P 576)
- A MEASURE RATE OF FLOW
- A ORDER PARTS
- A PERFORM PERIODIC INSPECTIONS OF FLUID PRESSURIZATION (65AN) FILL STATIONS
- A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)
- A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)

**ACTIVITIES:**

- A REMOVE AND REPLACE OVERFLOW TANKS
- A REMOVE AND REPLACE TRUs (TASK NUMBER: 61380)
- A REPAIR WIRING (TASK NUMBER: 61440)
- A SERVICE FLUID PRESSURIZATION (65AN) FILL STATIONS (P 590)

**SKILLS:**

- S DISCHARGE CAPACITORS PRIOR TO MAINTENANCE
- S FILL STATION WITH FC-40
- S FILL STATION WITH LIQUID NITROGEN
- S OPERATE FILL STATION
- S PERFORM SAFETY WIRING (TASK NUMBER: 61450)
- S PERFORM VISUAL INSPECTIONS
- S RUN VACUUM CHECKS
- S USE COMMON HANDTOOLS
- S USE LIQUID NITROGEN TO FILL COLD TRAP
- S USE MULTIMETER TO CHECK VOLTAGE AND CONTINUITY
- S USE SAFETY EQUIPMENT TO HANDLE LIQUID NITROGEN

**KNOWLEDGE:**

- K ANNOTATE FORMS
- K APPLY AC MOTOR THEORY OF OPERATION
- K APPLY AC CIRCUIT THEORY OF OPERATION
- K APPLY CAPACITOR THEORY OF OPERATION
- K APPLY DC CIRCUIT THEORY OF OPERATION
- K APPLY DC MOTOR THEORY OF OPERATION
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY RELAY THEORY OF OPERATION
- K APPLY RESISTOR THEORY OF OPERATION
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY SOLENOID THEORY OF OPERATION
- K APPLY TECHNICAL DATA
- K DOCUMENT HAZARDOUS WASTE LEVELS
- K IDENTIFY PROPER STORAGE CONTAINER FOR CONTAMINANTS
- K ISOLATE FAULTY AC CIRCUITS
- K ISOLATE FAULTY AC MOTORS
- K ISOLATE FAULTY CAPACITORS
- K ISOLATE FAULTY DC CIRCUITS
- K ISOLATE FAULTY DC MOTORS
- K ISOLATE FAULTY RELAYS
- K ISOLATE FAULTY RESISTORS
- K ISOLATE FAULTY SOLENOIDS
- K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)
- K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)
- K UTILIZE ELECTRICAL SCHEMATIC DIAGRAMS
- K UTILIZE MECHANICAL DIAGRAMS
- K VERIFY SUSPECTED FAULTY SRUs

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 219         |            | 89         | 88         | 82       | 45       | 2.78       |     |
| 451X6B | F 219         |            | 85         | 85         | 78       | 45       | 2.78       |     |
| 451X6  | F 219         |            | 86         | 85         | 80       | 45       | 2.78       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | P 574         |            | 3          | 1          | 1        | 1        | 5.43       |     |
| 451X6B | P 574         |            | 0          | 0          | 0        | 1        | 5.43       |     |
| 451X6  | P 574         |            | 2          | 1          | 0        | 1        | 5.43       |     |
| 451X6A | P 576         |            | 3          | 2          | 2        | 1        | 5.96       |     |
| 451X6B | P 576         |            | 0          | 0          | 0        | 1        | 5.96       |     |
| 451X6  | P 576         |            | 2          | 1          | 1        | 1        | 5.96       |     |
| 451X6A | P 577         |            | 3          | 2          | 2        | 0        | 6.24       |     |
| 451X6B | P 577         |            | 0          | 0          | 0        | 0        | 6.24       |     |
| 451X6  | P 577         |            | 2          | 1          | 1        | 0        | 6.24       |     |
| 451X6A | P 590         |            | 0          | 3          | 2        | 1        | 5.56       |     |
| 451X6B | P 590         |            | 0          | 0          | 0        | 1        | 5.56       |     |
| 451X6  | P 590         |            | 0          | 2          | 1        | 1        | 5.56       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
 F 219 INSPECT AND CLEAN TEST STATION BLOWERS AND FILTERS  
 F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
 LINE REPLACEABLE UNITS (LRU)  
 F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
 P 574 ALIGN AND CALIBRATE FLUID PRESSURIZATION (65AN) TEST  
 STATIONS  
 P 576 ISOLATE MALFUNCTIONS IN FLUID PRESSURIZATION (65AN) FILL  
 STATIONS  
 P 577 OVERHAUL FLUID PRESSURIZATION (65AN) FILL STATIONS  
 P 590 SERVICE FLUID PRESSURIZATION (65AN) FILL STATIONS

**TASK NUMBER: 60290**

**TASK STATEMENT:**

PERFORM OPERATIONAL TESTS ON LRUs THAT RUN ON AIS/R TEST STATIONS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

AIS/R TEST STATION

CTK

ESD PROTECTIVE EQUIPMENT

MICROWAVE TEST CART

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
SYSTEM TO

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR; NEW ISSUE FROM SUPPLY;  
FUNCTIONAL CHECK

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A LOAD COMPUTER PROGRAM

A EXECUTE TEST

**SKILLS:**

S CONNECT ADAPTER AND CABLES

S CONNECT LRU TO TEST STATION

S OPERATE TEST STATION

S PERFORM VISUAL INSPECTIONS

S PRESSURIZE LRUs (TASK NUMBER: 61460)

S USE COMMON HANDTOOLS

S USE MICROWAVE TEST CART

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY ESD PRECAUTIONS  
K APPLY INFORMATION PRESENTED ON SCREEN  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 243         |            | 61         | 62         | 65       | 39       | 4.32       |     |
| 451X6B | F 243         |            | 50         | 60         | 59       | 39       | 4.32       |     |
| 451X6  | F 243         |            | 55         | 60         | 62       | 39       | 4.32       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 243 PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECTION (T AND I)  
OF LRUs ISSUED FROM SUPPLY

**TASK NUMBER: 60300**

**TASK STATEMENT: .**

ISOLATE MALFUNCTIONS IN LRUs THAT RUN ON AIS/R TEST STATIONS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

AIS/R TEST STATION

CAPACITOR TESTER

CTK

DIGITAL MULTIMETER

ESD PROTECTIVE EQUIPMENT

OSCILLOSCOPE

SOLDERING STATION

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
SYSTEM TO

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**SKILLS:**

S CONNECT ADAPTER AND CABLES

S OPERATE TEST STATION

S SOLDER OR DESOLDER PC BOARDS

S SOLDER OR DESOLDER TERMINAL CONNECTIONS

S USE CAPACITOR TESTER

S USE COMMON HANDTOOLS

S USE DIGITAL MULTIMETER

S USE OSCILLOSCOPE

**KNOWLEDGE:**

K ANNOTATE FORMS

K APPLY AC CIRCUIT THEORY OF OPERATION

K APPLY AM MODULATION TRANSMITTER THEORY OF OPERATION

## KNOWLEDGE:

K APPLY AM RECEIVER THEORY OF OPERATION  
K APPLY CAPACITOR THEORY OF OPERATION  
K APPLY COMBINATIONAL LOGIC CIRCUIT THEORY OF OPERATION  
K APPLY DC CIRCUIT THEORY OF OPERATION  
K APPLY ESD PRECAUTIONS  
K APPLY FLIP-FLOP THEORY OF OPERATION  
K APPLY FM RECEIVER THEORY OF OPERATION  
K APPLY FM TRANSMITTER THEORY OF OPERATION  
K APPLY FREQUENCY SENSITIVE FILTER THEORY OF OPERATION  
K APPLY INDUCTOR THEORY OF OPERATION  
K APPLY INTEGRATED CIRCUIT THEORY OF OPERATION  
K APPLY JFET THEORY OF OPERATION  
K APPLY LCD THEORY OF OPERATION  
K APPLY LED THEORY OF OPERATION  
K APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATION  
K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION  
K APPLY LIMITER CIRCUIT ZENER DIODE THEORY OF OPERATION  
K APPLY LOGIC CIRCUIT COUNTER THEORY OF OPERATION  
K APPLY LOGIC CIRCUIT REGISTER THEORY OF OPERATION  
K APPLY LRU THEORY OF OPERATION  
K APPLY MAIN LOGIC GATE THEORY OF OPERATION  
K APPLY METER MOVEMENT THEORY OF OPERATION  
K APPLY MICROWAVE OSCILLATOR OR AMPLIFIER THEORY OF OPERATION  
K APPLY MOSFET THEORY OF OPERATION  
K APPLY MULTIVIBRATOR CIRCUIT THEORY OF OPERATION  
K APPLY OPERATIONAL AMPLIFIER THEORY OF OPERATION  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY OSCILLATOR CIRCUIT THEORY OF OPERATION  
K APPLY POWER SUPPLY FILTER THEORY OF OPERATION  
K APPLY POWER SUPPLY RECTIFIER THEORY OF OPERATION  
K APPLY POWER SUPPLY THEORY OF OPERATION  
K APPLY PULSE MODULATION RECEIVER THEORY OF OPERATION  
K APPLY PULSE MODULATION TRANSMITTER THEORY OF OPERATION  
K APPLY RCL CIRCUIT THEORY OF BASIC OPERATION  
K APPLY RCL CIRCUIT THEORY OF RESONANT OPERATION  
K APPLY RELAY THEORY OF OPERATION  
K APPLY RESISTOR THEORY OF OPERATION  
K APPLY RESONANT CAVITY THEORY OF OPERATION  
K APPLY SCR THEORY OF OPERATION  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY SINGLE SIDEBAND RECEIVER THEORY OF OPERATION  
K APPLY SINGLE SIDEBAND TRANSMITTER THEORY OF OPERATION  
K APPLY SOLID STATE DIODE THEORY OF OPERATION  
K APPLY TECHNICAL DATA  
K APPLY THEORY OF OPERATION OF COMPUTER MEMORIES  
K APPLY THREE-PHASE TRANSFORMER THEORY OF OPERATION  
K APPLY TRANSDUCER THEORY OF OPERATION  
K APPLY TRANSFORMER THEORY OF OPERATION  
K APPLY TRANSISTOR AMPLIFIER COUPLING CIRCUIT THEORY OF OPERATION  
K APPLY TRANSISTOR AMPLIFIER STABILIZATION CIRCUIT THEORY OF OPERATION  
K APPLY TRANSISTOR AMPLIFIER CIRCUIT THEORY OF OPERATION  
K APPLY TUNNEL DIODE THEORY OF OPERATION

## KNOWLEDGE:

K APPLY UJT THEORY OF OPERATION  
K APPLY VOLTAGE REGULATOR THEORY OF OPERATION  
K APPLY WAVEGUIDE THEORY OF OPERATION  
K APPLY WAVESHAPING CIRCUIT THEORY OF OPERATION  
K APPLY ZENER DIODE THEORY OF OPERATION  
K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING  
K DETERMINE WHETHER MALFUNCTION IS IN TEST STATION, LRU, OR ADAPTER (TASK NUMBER: 61360)  
K ISOLATE FAULTY AC CIRCUITS  
K ISOLATE FAULTY AM RECEIVERS  
K ISOLATE FAULTY AM TRANSMITTERS  
K ISOLATE FAULTY CAPACITORS  
K ISOLATE FAULTY COMBINATIONAL LOGIC CIRCUITS  
K ISOLATE FAULTY COMPUTER MEMORIES  
K ISOLATE FAULTY DC CIRCUITS  
K ISOLATE FAULTY FLIP-FLOPS  
K ISOLATE FAULTY FM MODULATION TRANSMITTERS  
K ISOLATE FAULTY FM RECEIVERS  
K ISOLATE FAULTY FREQUENCY SENSITIVE FILTERS  
K ISOLATE FAULTY INDUCTORS  
K ISOLATE FAULTY INTEGRATED CIRCUITS  
K ISOLATE FAULTY JFETs  
K ISOLATE FAULTY LCDS  
K ISOLATE FAULTY LEDs  
K ISOLATE FAULTY LIMITER CIRCUIT DIODES  
K ISOLATE FAULTY LIMITER CIRCUIT ZENER DIODES  
K ISOLATE FAULTY LIMITER TRANSISTOR CIRCUITS  
K ISOLATE FAULTY LOGIC COUNTERS  
K ISOLATE FAULTY MAIN LOGIC GATES  
K ISOLATE FAULTY METER MOVEMENTS  
K ISOLATE FAULTY MICROWAVE OSCILLATORS OR AMPLIFIERS  
K ISOLATE FAULTY MOSFETs  
K ISOLATE FAULTY MULTIVIBRATOR CIRCUITS  
K ISOLATE FAULTY OPERATIONAL AMPLIFIERS  
K ISOLATE FAULTY OSCILLATOR CIRCUITS  
K ISOLATE FAULTY POWER SUPPLIES  
K ISOLATE FAULTY POWER SUPPLY FILTERS  
K ISOLATE FAULTY POWER SUPPLY RECTIFIERS  
K ISOLATE FAULTY PULSE MODULATION RECEIVERS  
K ISOLATE FAULTY PULSE MODULATION TRANSMITTERS  
K ISOLATE FAULTY RCL CIRCUITS  
K ISOLATE FAULTY REGISTER LOGIC CIRCUITS  
K ISOLATE FAULTY RELAYS  
K ISOLATE FAULTY RESISTORS  
K ISOLATE FAULTY RESONANT CAVITIES  
K ISOLATE FAULTY SCRs  
K ISOLATE FAULTY SINGLE SIDEBAND RECEIVERS  
K ISOLATE FAULTY SINGLE SIDEBAND TRANSMITTERS  
K ISOLATE FAULTY SOLID STATE DIODES  
K ISOLATE FAULTY THREE-PHASE TRANSFORMERS  
K ISOLATE FAULTY TRANSDUCERS  
K ISOLATE FAULTY TRANSFORMERS  
K ISOLATE FAULTY TRANSISTOR AMPLIFIER STABILIZATION CIRCUITS

## KNOWLEDGE:

K ISOLATE FAULTY TRANSISTOR AMPLIFIER COUPLING CIRCUITS  
K ISOLATE FAULTY TRANSISTOR AMPLIFIER CIRCUITS  
K ISOLATE FAULTY TUNNEL DIODES  
K ISOLATE FAULTY UJT<sub>s</sub>  
K ISOLATE FAULTY VOLTAGE REGULATORS  
K ISOLATE FAULTY WAVEGUIDES  
K ISOLATE FAULTY WAVESHAPING CIRCUITS  
K ISOLATE FAULTY ZENER DIODES  
K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION  
PROCEDURES (F 273)  
K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
K TROUBLESHOOT AC CIRCUITS  
K TROUBLESHOOT AM RECEIVER CIRCUITS  
K TROUBLESHOOT AM TRANSMITTERS  
K TROUBLESHOOT COMBINATIONAL LOGIC CIRCUITS  
K TROUBLESHOOT DC CIRCUITS  
K TROUBLESHOOT FM MODULATION TRANSMITTERS  
K TROUBLESHOOT FM RECEIVER CIRCUITS  
K TROUBLESHOOT INDUCTORS  
K TROUBLESHOOT LIMITER CIRCUIT DIODES  
K TROUBLESHOOT LIMITER CIRCUIT TRANSISTORS  
K TROUBLESHOOT LIMITER CIRCUIT ZENER DIODES  
K TROUBLESHOOT LOGIC COUNTERS  
K TROUBLESHOOT LOGIC REGISTERS  
K TROUBLESHOOT MAIN LOGIC GATES  
K TROUBLESHOOT METER MOVEMENTS  
K TROUBLESHOOT OPERATIONAL AMPLIFIERS  
K TROUBLESHOOT POWER SUPPLY CIRCUITS  
K TROUBLESHOOT POWER SUPPLY FILTERS  
K TROUBLESHOOT POWER SUPPLY RECTIFIERS  
K TROUBLESHOOT PULSE MODULATION RECEIVERS  
K TROUBLESHOOT PULSE MODULATION TRANSMITTERS  
K TROUBLESHOOT RCL CIRCUITS  
K TROUBLESHOOT RELAYS  
K TROUBLESHOOT RESONANT CAVITIES  
K TROUBLESHOOT SINGLE SIDEBAND RECEIVERS  
K TROUBLESHOOT SINGLE SIDEBAND TRANSMITTERS  
K TROUBLESHOOT THREE-PHASE TRANSFORMERS  
K TROUBLESHOOT TRANSDUCERS  
K TROUBLESHOOT TRANSFORMERS  
K TROUBLESHOOT TRANSISTOR AMPLIFIER STABILIZATION CIRCUITS  
K TROUBLESHOOT TRANSISTOR AMPLIFIER CIRCUITS  
K TROUBLESHOOT TRANSISTOR AMPLIFIER COUPLING CIRCUITS  
K TROUBLESHOOT VOLTAGE REGULATOR  
K TROUBLESHOOT WAVE GENERATING CIRCUIT MULTIVIBRATORS  
K TROUBLESHOOT WAVE GENERATING CIRCUIT OSCILLATORS  
K TROUBLESHOOT WAVESHAPING CIRCUITS  
K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
K VERIFY SUSPECTED FAULTY SRU<sub>s</sub>

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES

**TASK NUMBER: 60310**

**TASK STATEMENT:**

REPAIR LRUs THAT RUN ON AIS/R TEST STATIONS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES.

CTK

ESD PROTECTIVE EQUIPMENT

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

APPLICABLE IPB

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CLEAN CONTACTS (F 210)

A CLEAN LRU

A ORDER PARTS

A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)

A REPAIR WIRING (TASK NUMBER: 61440)

**SKILLS:**

S OPERATE TEST STATION

S USE COMMON HANDTOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS

K APPLY ESD PRECAUTIONS

K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS

K APPLY SHOP SAFETY PROCEDURES

K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS

F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
LINE REPLACEABLE UNITS (LRU)

**TASK NUMBER:** 60320

**TASK STATEMENT:**

PERFORM OPERATIONAL TESTS ON RF TYPE LRU<sub>s</sub>

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
DIGITAL MULTIMETER  
POWER METER  
OSCILLOSCOPE  
SPECTRUM ANALYZER  
TEST STATION  
VECTOR VOLTMETER

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT; 2 PERSON REQUIREMENT

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR; NEW ISSUE FROM SUPPLY;  
FUNCTIONAL CHECK

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CALL UP TAPE  
A EXECUTE TEST

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S CONNECT LRU TO TEST STATION  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S PRESSURIZE LRU<sub>s</sub> (TASK NUMBER: 61460)  
S USE COMMON HANDTOOLS  
S USE DIGITAL MULTIMETER TO MEASURE VOLTAGE  
S USE OSCILLOSCOPE TO MEASURE VOLTAGES AND PULSE  
CHARACTERISTICS

**SKILLS:**

S USE POWER METER  
 S USE SPECTRUM ANALYZER  
 S USE VECTOR VOLTMETER TO MEASURE PHASE SHIFT AND POWER

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 243         |            | 61         | 62         | 65       | 39       | 4.32       |     |
| 451X6B | F 243         |            | 50         | 60         | 59       | 39       | 4.32       |     |
| 451X6  | F 243         |            | 55         | 60         | 62       | 39       | 4.32       |     |
| 451X6A | N 563         |            | 0          | 3          | 2        | 0        | 5.95       |     |
| 451X6B | N 563         |            | 0          | 0          | 0        | 0        | 5.95       |     |
| 451X6  | N 563         |            | 0          | 2          | 1        | 0        | 5.95       |     |
| 451X6A | S 717         |            | 0          | 3          | 5        | 1        | 4.57       |     |
| 451X6B | S 717         |            | 0          | 0          | 0        | 1        | 4.57       |     |
| 451X6  | S 717         |            | 0          | 2          | 3        | 1        | 4.57       |     |
| 451X6A | S 736         |            | 0          | 0          | 0        | 0        | 4.63       |     |
| 451X6B | S 736         |            | 0          | 0          | 0        | 0        | 4.63       |     |
| 451X6  | S 736         |            | 0          | 0          | 0        | 0        | 4.63       |     |
| 451X6A | S 737         |            | 0          | 3          | 5        | 0        | 4.84       |     |
| 451X6B | S 737         |            | 0          | 0          | 0        | 0        | 4.84       |     |
| 451X6  | S 737         |            | 0          | 2          | 3        | 0        | 4.84       |     |
| 451X6A | S 751         |            | 5          | 10         | 11       | 3        | 4.82       |     |
| 451X6B | S 751         |            | 0          | 0          | 0        | 3        | 4.82       |     |
| 451X6  | S 751         |            | 3          | 5          | 6        | 3        | 4.82       |     |
| 451X6A | S 754         |            | 0          | 4          | 5        | 1        | 5.05       |     |
| 451X6B | S 754         |            | 0          | 0          | 0        | 1        | 5.05       |     |
| 451X6  | S 754         |            | 0          | 2          | 3        | 1        | 5.05       |     |
| 451X6A | S 756         |            | 0          | 6          | 7        | 1        | 5.50       |     |
| 451X6B | S 756         |            | 0          | 1          | 0        | 1        | 5.50       |     |
| 451X6  | S 756         |            | 0          | 3          | 4        | 1        | 5.50       |     |
| 451X6A | S 757         |            | 5          | 11         | 13       | 2        | 5.88       |     |
| 451X6B | S 757         |            | 0          | 0          | 2        | 2        | 5.88       |     |
| 451X6  | S 757         |            | 3          | 6          | 8        | 2        | 5.88       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | S 761         |            | 0          | 0          | 1        | 0        | 4.51       |     |
| 451X6B | S 761         |            | 0          | 0          | 0        | 0        | 4.51       |     |
| 451X6  | S 761         |            | 0          | 0          | 1        | 0        | 4.51       |     |
| 451X6A | S 767         |            | 8          | 18         | 20       | 4        | 5.84       |     |
| 451X6B | S 767         |            | 0          | 0          | 2        | 4        | 5.84       |     |
| 451X6  | S 767         |            | 5          | 9          | 11       | 4        | 5.84       |     |
| 451X6A | S 770         |            | 8          | 19         | 20       | 3        | 4.05       |     |
| 451X6B | S 770         |            | 0          | 0          | 1        | 3        | 4.05       |     |
| 451X6  | S 770         |            | 5          | 10         | 11       | 3        | 4.05       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 243 PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECTION (T AND I)  
OF LRUs ISSUED FROM SUPPLY

N 563 VERIFY F-111D ARS TRANSMITTER MAXIMUM OUTPUT LEVELS

S 717 PERFORM OPERATIONAL TESTS OF APQ-130 TRANSMITTERS

S 736 PERFORM OPERATIONAL TESTS OF ELECTRONIC PROCESSING UNITS

S 737 PERFORM OPERATIONAL TESTS OF F-111D ARS ANTENNAS

S 751 PERFORM OPERATIONAL TESTS OF LARA/RTs

S 754 PERFORM OPERATIONAL TESTS OF MASTER FREQUENCY GENERATORS

S 756 PERFORM OPERATIONAL TESTS OF MICROWAVE RECEIVER UNITS

S 757 PERFORM OPERATIONAL TESTS OF MRTs

S 761 PERFORM OPERATIONAL TESTS OF RRTs

S 767 PERFORM OPERATIONAL TESTS OF TFR ANTENNA RECEIVERS

S 770 PERFORM OPERATIONAL TESTS OF TFR TRANSMITTER-SYNCHRONIZERS

**TASK NUMBER: 60330**

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN RF TYPE LRU<sub>s</sub>

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
ESD PROTECTIVE EQUIPMENT  
FILL STATION (65AN)  
DIGITAL MULTIMETER  
TEST STATION  
REFLECTOMETER  
VECTOR VOLTMETER

**REFERENCES:**

APPLICABLE SHOP SYSTEMS TO  
APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S INSTALL EXTENDER BOARDS  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S PRESSURIZE LRU<sub>s</sub> (TASK NUMBER: 61460)  
S USE COMMON HANDTOOLS  
S USE DIGITAL MULTIMETER TO MEASURE VOLTAGES AND CONTINUITY  
S USE FILL STATION TO CREATE PRESSURE TO ISOLATE FC-40 LEAK  
(TRANSMITTER)  
S USE OSCILLOSCOPE TO MEASURE VOLTAGE AND PULSE CHARACTERISTICS  
S USE REFLECTOMETER  
S USE VECTOR VOLTMETER TO MEASURE RF VOLTAGE AND DEGREES OF  
PHASE SHIFT

## KNOWLEDGE:

K ANNOTATE FORMS  
K APPLY AC CIRCUIT THEORY OF OPERATION  
K APPLY AC MOTOR THEORY OF OPERATION  
K APPLY CAPACITOR THEORY OF OPERATION  
K APPLY CMOSs THEORY OF OPERATION  
K APPLY DC CIRCUIT THEORY OF OPERATION  
K APPLY ESD PRECAUTIONS  
K APPLY FLIP-FLOP THEORY OF OPERATION  
K APPLY FREQUENCY SENSITIVE FILTER THEORY OF OPERATION  
K APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATION  
K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION  
K APPLY LIMITER CIRCUIT ZENER DIODE THEORY OF OPERATION  
K APPLY LRU THEORY OF OPERATION  
K APPLY MAIN LOGIC GATE THEORY OF OPERATION  
K APPLY OPERATIONAL AMPLIFIER THEORY OF OPERATION  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY OSCILLATOR CIRCUIT THEORY OF OPERATION  
K APPLY POWER SUPPLY FILTER THEORY OF OPERATION  
K APPLY POWER SUPPLY RECTIFIER THEORY OF OPERATION  
K APPLY POWER SUPPLY THEORY OF OPERATION  
K APPLY RADAR PRINCIPLES  
K APPLY RESISTOR THEORY OF OPERATION  
K APPLY RESONANT CAVITY THEORY OF OPERATION  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY SOLENOID THEORY OF OPERATION  
K APPLY SOLID STATE DIODE THEORY OF OPERATION  
K APPLY TECHNICAL DATA  
K APPLY TRANSMITTER THEORY OF OPERATION  
K APPLY TTL THEORY OF OPERATION  
K APPLY VOLTAGE REGULATOR THEORY OF OPERATION  
K APPLY WAVEGUIDE THEORY OF OPERATION  
K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING  
K DETERMINE WHETHER MALFUNCTION IS IN TEST STATION, LRU, OR  
ADAPTER (TASK NUMBER: 61360)  
K ISOLATE FAULTY AC CIRCUITS  
K ISOLATE FAULTY AC MOTORS  
K ISOLATE FAULTY CAPACITORS  
K ISOLATE FAULTY CMOSs  
K ISOLATE FAULTY DC CIRCUITS  
K ISOLATE FAULTY FLIP-FLOPS  
K ISOLATE FAULTY FREQUENCY SENSITIVE FILTERS  
K ISOLATE FAULTY LIMITER CIRCUIT DIODES  
K ISOLATE FAULTY LIMITER CIRCUIT ZENER DIODES  
K ISOLATE FAULTY LIMITER TRANSISTOR CIRCUITS  
K ISOLATE FAULTY MAIN LOGIC GATES  
K ISOLATE FAULTY OPERATIONAL AMPLIFIERS  
K ISOLATE FAULTY OSCILLATOR CIRCUITS  
K ISOLATE FAULTY POWER SUPPLIES  
K ISOLATE FAULTY POWER SUPPLY FILTERS  
K ISOLATE FAULTY POWER SUPPLY RECTIFIERS  
K ISOLATE FAULTY RESISTORS  
K ISOLATE FAULTY RESONANT CAVITIES  
K ISOLATE FAULTY SOLENOIDS

**KNOWLEDGE:**

K ISOLATE FAULTY SOLID STATE DIODES  
 K ISOLATE FAULTY TTLs  
 K ISOLATE FAULTY VOLTAGE REGULATORS  
 K ISOLATE FAULTY WAVEGUIDES  
 K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION  
 PROCEDURES (F 278)  
 K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
 K TROUBLESHOOT AC CIRCUITS  
 K TROUBLESHOOT AC MOTORS  
 K TROUBLESHOOT CMOS LOGIC FAMILIES  
 K TROUBLESHOOT DC CIRCUITS  
 K TROUBLESHOOT FLIP-FLOPS  
 K TROUBLESHOOT FREQUENCY SENSITIVE FILTERS  
 K TROUBLESHOOT LIMITER CIRCUIT DIODES  
 K TROUBLESHOOT LIMITER CIRCUIT TRANSISTORS  
 K TROUBLESHOOT LIMITER CIRCUIT ZENER DIODES  
 K TROUBLESHOOT MAIN LOGIC GATES  
 K TROUBLESHOOT OPERATIONAL AMPLIFIERS  
 K TROUBLESHOOT POWER SUPPLY CIRCUITS  
 K TROUBLESHOOT POWER SUPPLY FILTERS  
 K TROUBLESHOOT POWER SUPPLY RECTIFIERS  
 K TROUBLESHOOT RESONANT CAVITIES  
 K TROUBLESHOOT SOLENOIDS  
 K TROUBLESHOOT TTL LOGIC FAMILIES  
 K TROUBLESHOOT VOLTAGE REGULATOR  
 K TROUBLESHOOT WAVE GENERATING CIRCUIT OSCILLATORS  
 K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
 K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | S 655         |            | 3          | 4          | 5        | 1        | 5.75       |     |
| 451X6B | S 655         |            | 0          | 0          | 0        | 1        | 5.75       |     |
| 451X6  | S 655         |            | 2          | 2          | 3        | 1        | 5.75       |     |
| 451X6A | S 673         |            | 0          | 1          | 1        | 0        | 5.61       |     |
| 451X6B | S 673         |            | 0          | 0          | 0        | 0        | 5.61       |     |
| 451X6  | S 673         |            | 0          | 1          | 1        | 0        | 5.61       |     |
| 451X6A | S 674         |            | 0          | 3          | 4        | 1        | 5.37       |     |
| 451X6B | S 674         |            | 0          | 0          | 0        | 1        | 5.37       |     |
| 451X6  | S 674         |            | 0          | 2          | 2        | 1        | 5.37       |     |
| 451X6A | S 688         |            | 8          | 13         | 12       | 2        | 5.30       |     |
| 451X6B | S 688         |            | 0          | 0          | 0        | 2        | 5.30       |     |
| 451X6  | S 688         |            | 5          | 7          | 6        | 2        | 5.30       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | S 691         |            | 0          | 4          | 5        | 2        | 5.59       |     |
| 451X6B | S 691         |            | 0          | 0          | 0        | 2        | 5.59       |     |
| 451X6  | S 691         |            | 0          | 2          | 3        | 2        | 5.59       |     |
| 451X6A | S 693         |            | 0          | 4          | 8        | 1        | 5.70       |     |
| 451X6B | S 693         |            | 0          | 1          | 0        | 1        | 5.70       |     |
| 451X6  | S 693         |            | 0          | 3          | 4        | 1        | 5.70       |     |
| 451X6A | S 694         |            | 8          | 12         | 13       | 1        | 5.93       |     |
| 451X6B | S 694         |            | 0          | 0          | 2        | 1        | 5.93       |     |
| 451X6  | S 694         |            | 5          | 6          | 8        | 1        | 5.93       |     |
| 451X6A | S 697         |            | 0          | 0          | 0        | 0        | 5.73       |     |
| 451X6B | S 697         |            | 0          | 0          | 0        | 0        | 5.73       |     |
| 451X6  | S 697         |            | 0          | 0          | 0        | 0        | 5.73       |     |
| 451X6A | S 705         |            | 8          | 19         | 19       | 2        | 6.12       |     |
| 451X6B | S 705         |            | 0          | 1          | 2        | 2        | 6.12       |     |
| 451X6  | S 705         |            | 5          | 10         | 11       | 2        | 6.12       |     |
| 451X6A | S 708         |            | 8          | 19         | 19       | 3        | 4.77       |     |
| 451X6B | S 708         |            | 0          | 0          | 1        | 3        | 4.77       |     |
| 451X6  | S 708         |            | 5          | 10         | 11       | 3        | 4.77       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
 S 655 ISOLATE MALFUNCTIONS IN APQ-130 TRANSMITTERS  
 S 673 ISOLATE MALFUNCTIONS IN ELECTRONIC PROCESSING UNITS  
 S 674 ISOLATE MALFUNCTIONS IN F-111D ARS ANTENNAS TO SHOP  
 REPLACEABLE UNIT (SRU)  
 S 688 ISOLATE MALFUNCTIONS IN LARA/RTs  
 S 691 ISOLATE MALFUNCTIONS IN MASTER FREQUENCY GENERATORS  
 S 693 ISOLATE MALFUNCTIONS IN MICROWAVE RECEIVER UNITS  
 S 694 ISOLATE MALFUNCTIONS IN MRTs  
 S 697 ISOLATE MALFUNCTIONS IN RADAR RECEIVER-TRANSMITTERS (RRT)  
 S 705 ISOLATE MALFUNCTIONS IN TFR ANTENNA RECEIVERS  
 S 708 ISOLATE MALFUNCTIONS IN TFR TRANSMITTER SYNCHRONIZERS

**TASK NUMBER: 60340**

**TASK STATEMENT:**

REPAIR RF TYPE LRU<sub>s</sub>

**TASK NOTES:**

RF HAZARD

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES

CTK

DIGITAL MULTIMETER

FILL STATION (65AN)

PRESSURE TESTER

TEST STATION

VECTOR VOLTMETER

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

APPLICABLE IPB

**CONDITIONS:**

2 PERSON REQUIREMENT

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN SRU<sub>s</sub>

A CLEAN CONTACTS (F 210)

A DRAIN AND FILL APQ-130 ATTACK RADAR TRANSMITTER (S 649)

A ORDER PARTS

A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)

A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)

A REMOVE AND REPLACE SRU<sub>s</sub> (TASK NUMBER: 61390)

A REPAIR WIRING (TASK NUMBER: 61440)

A RESEAT SRU<sub>s</sub>

**SKILLS:**

S INSTALL EXTENDER BOARDS  
 S OPERATE PRESSURE TESTER  
 S OPERATE TEST STATION  
 S PERFORM VISUAL INSPECTIONS  
 S USE COMMON HANDTOOLS  
 S USE DIGITAL MULTIMETER TO CHECK VOLTAGES AND CONTINUITY  
 S USE FILL STATION (65AN) TO DRAIN AND VACUUM FILL ARS TRANSMITTER  
 S USE VECTOR VOLTMETER TO MEASURE RF VOLTAGE AND PHASE

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | S 611         |            | 0          | 1          | 3        | 1        | 5.08       |     |
| 451X6B | S 611         |            | 0          | 0          | 0        | 1        | 5.08       |     |
| 451X6  | S 611         |            | 0          | 1          | 1        | 1        | 5.08       |     |
| 451X6A | S 621         |            | 0          | 0          | 0        | 0        | 5.45       |     |
| 451X6B | S 621         |            | 0          | 0          | 0        | 0        | 5.45       |     |
| 451X6  | S 621         |            | 0          | 0          | 0        | 0        | 5.45       |     |
| 451X6A | S 622         |            | 0          | 3          | 5        | 0        | 6.01       |     |
| 451X6B | S 622         |            | 0          | 0          | 0        | 0        | 6.01       |     |
| 451X6  | S 622         |            | 0          | 2          | 3        | 0        | 6.01       |     |
| 451X6A | S 634         |            | 8          | 13         | 12       | 2        | 5.37       |     |
| 451X6B | S 634         |            | 0          | 0          | 0        | 2        | 5.37       |     |
| 451X6  | S 634         |            | 5          | 7          | 6        | 2        | 5.37       |     |
| 451X6A | S 636         |            | 0          | 3          | 4        | 1        | 5.20       |     |
| 451X6B | S 636         |            | 0          | 0          | 0        | 1        | 5.20       |     |
| 451X6  | S 636         |            | 0          | 2          | 2        | 1        | 5.20       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | S 637         |            | 0          | 3          | 7        | 1        | 5.54       |     |
| 451X6B | S 637         |            | 0          | 0          | 0        | 1        | 5.54       |     |
| 451X6  | S 637         |            | 0          | 2          | 4        | 1        | 5.54       |     |
| 451X6A | S 638         |            | 8          | 12         | 13       | 2        | 6.05       |     |
| 451X6B | S 638         |            | 0          | 0          | 2        | 2        | 6.05       |     |
| 451X6  | S 638         |            | 5          | 6          | 8        | 2        | 6.05       |     |
| 451X6A | S 644         |            | 8          | 20         | 20       | 4        | 6.74       |     |
| 451X6B | S 644         |            | 0          | 1          | 2        | 4        | 6.74       |     |
| 451X6  | S 644         |            | 5          | 11         | 11       | 4        | 6.74       |     |
| 451X6A | S 646         |            | 8          | 17         | 18       | 3        | 5.06       |     |
| 451X6B | S 646         |            | 0          | 0          | 1        | 3        | 5.06       |     |
| 451X6  | S 646         |            | 5          | 8          | 10       | 3        | 5.06       |     |
| 451X6A | S 649         |            | 0          | 3          | 4        | 1        | 5.38       |     |
| 451X6B | S 649         |            | 0          | 0          | 0        | 1        | 5.38       |     |
| 451X6  | S 649         |            | 0          | 2          | 2        | 1        | 5.38       |     |
| 451X6A | S 777         |            | 0          | 3          | 4        | 1        | 4.67       |     |
| 451X6B | S 777         |            | 0          | 0          | 0        | 1        | 4.67       |     |
| 451X6  | S 777         |            | 0          | 2          | 2        | 1        | 4.67       |     |
| 451X6A | S 778         |            | 0          | 3          | 4        | 1        | 4.65       |     |
| 451X6B | S 778         |            | 0          | 0          | 0        | 1        | 4.65       |     |
| 451X6  | S 778         |            | 0          | 2          | 2        | 1        | 4.65       |     |
| 451X6A | S 799         |            | 0          | 1          | 0        | 0        | 4.33       |     |
| 451X6B | S 799         |            | 0          | 0          | 0        | 0        | 4.33       |     |
| 451X6  | S 799         |            | 0          | 1          | 0        | 0        | 4.33       |     |
| 451X6A | S 800         |            | 0          | 1          | 1        | 0        | 4.11       |     |
| 451X6B | S 800         |            | 0          | 0          | 0        | 0        | 4.11       |     |
| 451X6  | S 800         |            | 0          | 1          | 0        | 0        | 4.11       |     |
| 451X6A | S 801         |            | 0          | 3          | 4        | 0        | 4.44       |     |
| 451X6B | S 801         |            | 0          | 0          | 0        | 0        | 4.44       |     |
| 451X6  | S 801         |            | 0          | 2          | 2        | 0        | 4.44       |     |
| 451X6A | S 802         |            | 0          | 3          | 4        | 0        | 4.33       |     |
| 451X6B | S 802         |            | 0          | 0          | 0        | 0        | 4.33       |     |
| 451X6  | S 802         |            | 0          | 2          | 2        | 0        | 4.33       |     |
| 451X6A | S 818         |            | 5          | 11         | 11       | 2        | 3.58       |     |
| 451X6B | S 818         |            | 0          | 0          | 0        | 2        | 3.58       |     |
| 451X6  | S 818         |            | 3          | 6          | 6        | 2        | 3.58       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | S 820         |            | 0          | 3          | 5        | 2        | 4.71       |     |
| 451X6B | S 820         |            | 0          | 0          | 0        | 2        | 4.71       |     |
| 451X6  | S 820         |            | 0          | 2          | 3        | 2        | 4.71       |     |
| 451X6A | S 821         |            | 0          | 4          | 4        | 2        | 4.60       |     |
| 451X6B | S 821         |            | 0          | 0          | 0        | 2        | 4.60       |     |
| 451X6  | S 821         |            | 0          | 2          | 2        | 2        | 4.60       |     |
| 451X6A | S 823         |            | 0          | 4          | 6        | 1        | 4.70       |     |
| 451X6B | S 823         |            | 0          | 1          | 0        | 1        | 4.70       |     |
| 451X6  | S 823         |            | 0          | 3          | 4        | 1        | 4.70       |     |
| 451X6A | S 824         |            | 0          | 4          | 6        | 1        | 4.58       |     |
| 451X6B | S 824         |            | 0          | 1          | 1        | 1        | 4.58       |     |
| 451X6  | S 824         |            | 0          | 3          | 3        | 1        | 4.58       |     |
| 451X6A | S 825         |            | 5          | 8          | 11       | 1        | 5.17       |     |
| 451X6B | S 825         |            | 0          | 0          | 2        | 1        | 5.17       |     |
| 451X6  | S 825         |            | 3          | 4          | 7        | 1        | 5.17       |     |
| 451X6A | S 826         |            | 5          | 10         | 12       | 1        | 4.53       |     |
| 451X6B | S 826         |            | 0          | 0          | 2        | 1        | 4.53       |     |
| 451X6  | S 826         |            | 3          | 5          | 7        | 1        | 4.53       |     |
| 451X6A | S 831         |            | 0          | 0          | 0        | 0        | 4.87       |     |
| 451X6B | S 831         |            | 0          | 0          | 0        | 0        | 4.87       |     |
| 451X6  | S 831         |            | 0          | 0          | 0        | 0        | 4.87       |     |
| 451X6A | S 832         |            | 0          | 0          | 0        | 0        | 4.64       |     |
| 451X6B | S 832         |            | 0          | 0          | 0        | 0        | 4.64       |     |
| 451X6  | S 832         |            | 0          | 0          | 0        | 0        | 4.64       |     |
| 451X6A | S 843         |            | 3          | 13         | 16       | 2        | 5.72       |     |
| 451X6B | S 843         |            | 0          | 0          | 2        | 2        | 5.72       |     |
| 451X6  | S 843         |            | 2          | 7          | 9        | 2        | 5.72       |     |
| 451X6A | S 845         |            | 3          | 11         | 14       | 2        | 5.73       |     |
| 451X6B | S 845         |            | 0          | 0          | 2        | 2        | 5.73       |     |
| 451X6  | S 845         |            | 2          | 6          | 8        | 2        | 5.73       |     |
| 451X6A | S 847         |            | 5          | 13         | 16       | 2        | 4.00       |     |
| 451X6B | S 847         |            | 0          | 0          | 1        | 2        | 4.00       |     |
| 451X6  | S 847         |            | 3          | 7          | 9        | 2        | 4.00       |     |
| 451X6A | S 848         |            | 5          | 16         | 16       | 2        | 3.89       |     |
| 451X6B | S 848         |            | 0          | 0          | 1        | 2        | 3.89       |     |
| 451X6  | S 848         |            | 3          | 8          | 9        | 2        | 3.89       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
LINE REPLACEABLE UNITS (LRU)  
S 611 ALIGN APQ-130 TRANSMITTERS  
S 621 ALIGN ELECTRONIC PROCESSING UNITS  
S 622 ALIGN F-111D ARS ANTENNAS  
S 634 ALIGN LARA R/T  
S 636 ALIGN MASTER FREQUENCY GENERATORS  
S 637 ALIGN MICROWAVE RECEIVER UNITS  
S 638 ALIGN MODULATOR RECEIVER-TRANSMITTERS (MRT)  
S 644 ALIGN TERRAIN FOLLOWING RADAR (TFR) ANTENNA-RECEIVERS  
S 646 ALIGN TFR TRANSMITTER-SYNCHRONIZERS  
S 649 DRAIN AND FILL APQ-130 ATTACK RADAR TRANSMITTERS  
S 777 REMOVE OR REPLACE APQ-130 TRANSMITTER COMPONENTS  
S 778 REMOVE OR REPLACE APQ-130 TRANSMITTER SRUs  
S 799 REMOVE OR REPLACE ELECTRONIC PROCESSING UNIT COMPONENTS  
S 800 REMOVE OR REPLACE ELECTRONIC PROCESSING UNIT SRUs  
S 801 REMOVE OR REPLACE F-111D ARS ANTENNA SRU COMPONENTS  
S 802 REMOVE OR REPLACE F-111D ARS ANTENNA SRUs  
S 818 REMOVE OR REPLACE LARA/RT SRUs  
S 820 REMOVE OR REPLACE MASTER FREQUENCY GENERATOR COMPONENTS  
S 821 REMOVE OR REPLACE MASTER FREQUENCY GENERATOR SRUs  
S 823 REMOVE OR REPLACE MICROWAVE RECEIVER UNIT COMPONENTS  
S 824 REMOVE OR REPLACE MICROWAVE RECEIVER UNIT SRUs  
S 825 REMOVE OR REPLACE MRT COMPONENTS  
S 826 REMOVE OR REPLACE MRT SRUs  
S 831 REMOVE OR REPLACE RRT COMPONENTS  
S 832 REMOVE OR REPLACE RRT SRUs  
S 843 REMOVE OR REPLACE TFR ANTENNA RECEIVER COMPONENTS  
S 845 REMOVE OR REPLACE TFR RADAR ANTENNA RECEIVER SRUs  
S 847 REMOVE OR REPLACE TFR TRANSMITTER SYNCHRONIZER COMPONENTS  
S 848 REMOVE OR REPLACE TFR TRANSMITTER SYNCHRONIZER SRUs

**TASK NUMBER: 60350**

**TASK STATEMENT:**

PERFORM OPERATIONAL TESTS ON DIGITAL TYPE LRUs

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

MULTIMETER

CTK

ESD PROTECTIVE EQUIPMENT

OSCILLOSCOPE

TEST STATION

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR; NEW ISSUE FROM SUPPLY;  
FUNCTIONAL CHECK

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CALL UP TAPE

A EXECUTE TEST

**SKILLS:**

S CONNECT ADAPTER AND CABLES

S CONNECT LRU TO TEST STATION

S OPERATE TEST STATION

S PERFORM VISUAL INSPECTIONS

S USE COMMON HANDTOOLS

S USE MULTIMETER

S USE OSCILLOSCOPE

**KNOWLEDGE:**

K ANNOTATE FORMS

K APPLY ESD PRECAUTIONS

**KNOWLEDGE:**

K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 243         |            | 61         | 62         | 65       | 39       | 4.32       |     |
| 451X6B | F 243         |            | 50         | 60         | 59       | 39       | 4.32       |     |
| 451X6  | F 243         |            | 55         | 60         | 62       | 39       | 4.32       |     |
| 451X6A | S 712         |            | 5          | 8          | 8        | 3        | 4.30       |     |
| 451X6B | S 712         |            | 0          | 0          | 0        | 3        | 4.30       |     |
| 451X6  | S 712         |            | 3          | 4          | 4        | 3        | 4.30       |     |
| 451X6A | S 721         |            | 13         | 12         | 14       | 5        | 4.55       |     |
| 451X6B | S 721         |            | 0          | 0          | 2        | 5        | 4.55       |     |
| 451X6  | S 721         |            | 8          | 6          | 8        | 5        | 4.55       |     |
| 451X6A | S 722         |            | 13         | 13         | 12       | 4        | 5.26       |     |
| 451X6B | S 722         |            | 0          | 0          | 0        | 4        | 5.26       |     |
| 451X6  | S 722         |            | 8          | 7          | 6        | 4        | 5.26       |     |
| 451X6A | S 727         |            | 3          | 2          | 1        | 0        | 4.32       |     |
| 451X6B | S 727         |            | 0          | 0          | 0        | 0        | 4.32       |     |
| 451X6  | S 727         |            | 2          | 1          | 1        | 0        | 4.32       |     |
| 451X6A | S 728         |            | 8          | 9          | 6        | 1        | 4.68       |     |
| 451X6B | S 728         |            | 0          | 0          | 0        | 1        | 4.68       |     |
| 451X6  | S 728         |            | 5          | 5          | 3        | 1        | 4.68       |     |
| 451X6A | S 733         |            | 3          | 1          | 1        | 0        | 4.65       |     |
| 451X6B | S 733         |            | 0          | 0          | 0        | 0        | 4.65       |     |
| 451X6  | S 733         |            | 2          | 1          | 1        | 0        | 4.65       |     |
| 451X6A | S 740         |            | 3          | 4          | 3        | 1        | 3.82       |     |
| 451X6B | S 740         |            | 0          | 0          | 0        | 1        | 3.82       |     |
| 451X6  | S 740         |            | 2          | 2          | 2        | 1        | 3.82       |     |
| 451X6A | S 741         |            | 21         | 19         | 18       | 7        | 4.75       |     |
| 451X6B | S 741         |            | 0          | 0          | 2        | 7        | 4.75       |     |
| 451X6  | S 741         |            | 12         | 10         | 10       | 7        | 4.75       |     |
| 451X6A | S 742         |            | 16         | 17         | 17       | 7        | 4.08       |     |
| 451X6B | S 742         |            | 0          | 0          | 1        | 7        | 4.08       |     |
| 451X6  | S 742         |            | 11         | 9          | 9        | 7        | 4.08       |     |
| 451X6A | S 747         |            | 16         | 19         | 14       | 3        | 4.13       |     |
| 451X6B | S 747         |            | 0          | 0          | 0        | 3        | 4.13       |     |
| 451X6  | S 747         |            | 9          | 10         | 8        | 3        | 4.13       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | S 755         |            | 3          | 3          | 6        | 3        | 4.61       |     |
| 451X6B | S 755         |            | 0          | 0          | 0        | 3        | 4.61       |     |
| 451X6  | S 755         |            | 2          | 2          | 3        | 3        | 4.61       |     |
| 451X6A | S 760         |            | 0          | 0          | 1        | 0        | 4.43       |     |
| 451X6B | S 760         |            | 0          | 0          | 0        | 0        | 4.43       |     |
| 451X6  | S 760         |            | 0          | 0          | 0        | 0        | 4.43       |     |
| 451X6A | S 762         |            | 11         | 20         | 20       | 7        | 4.48       |     |
| 451X6B | S 762         |            | 0          | 0          | 0        | 7        | 4.48       |     |
| 451X6  | S 762         |            | 6          | 10         | 10       | 7        | 4.48       |     |
| 451X6A | S 764         |            | 11         | 16         | 17       | 5        | 5.42       |     |
| 451X6B | S 764         |            | 0          | 0          | 0        | 5        | 5.42       |     |
| 451X6  | S 764         |            | 6          | 8          | 9        | 5        | 5.42       |     |
| 451X6A | S 771         |            | 3          | 1          | 4        | 1        | 4.37       |     |
| 451X6B | S 771         |            | 0          | 0          | 0        | 1        | 4.37       |     |
| 451X6  | S 771         |            | 2          | 1          | 2        | 1        | 4.37       |     |
| 451X6A | T 861         |            | 0          | 0          | 0        | 0        | 4.69       |     |
| 451X6B | T 861         |            | 0          | 0          | 0        | 0        | 4.69       |     |
| 451X6  | T 861         |            | 0          | 0          | 0        | 0        | 4.69       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 243 PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECTION (T AND I)  
OF LRUs ISSUED FROM SUPPLY

S 712 PERFORM OPERATIONAL TESTS OF AJN-16 NCUs

S 721 PERFORM OPERATIONAL TESTS OF ARS ANTENNAS OTHER THAN F-111D

S 722 PERFORM OPERATIONAL TESTS OF ARS ELECTRICAL SYNCHRONIZERS

S 727 PERFORM OPERATIONAL TESTS OF AYK-6 GENERAL PURPOSE  
COMPUTERS

S 728 PERFORM OPERATIONAL TESTS OF BCUs

S 733 PERFORM OPERATIONAL TESTS OF DDPUs

S 740 PERFORM OPERATIONAL TESTS OF FDCs

S 741 PERFORM OPERATIONAL TESTS OF FEEL AND TRIM ASSEMBLIES

S 742 PERFORM OPERATIONAL TESTS OF FLIGHT CONTROL COMPUTERS

S 747 PERFORM OPERATIONAL TESTS OF INTERFERENCE BLANKERS

S 755 PERFORM OPERATIONAL TESTS OF MCUs

S 760 PERFORM OPERATIONAL TESTS OF RI RECORDERS

S 762 PERFORM OPERATIONAL TESTS OF SIS COMPUTERS

S 764 PERFORM OPERATIONAL TESTS OF TF COMPUTERS

S 771 PERFORM OPERATIONAL TESTS OF WNC/MCs

T 861 PERFORM OPERATIONAL TESTS OF HORIZONTAL SITUATION DISPLAY  
PROCESSORS (HSDP)

**TASK NUMBER: 60360**

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN DIGITAL TYPE LRU

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
DIGITAL MULTIMETER  
ESD PROTECTIVE EQUIPMENT  
OSCILLOSCOPE  
TEST STATION

**REFERENCES:**

APPLICABLE SHOP SYSTEMS TO  
APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S INSTALL EXTENDER BOARDS  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S USE DIGITAL MULTIMETER TO CHECK VOLTAGES AND CONTINUITY  
S USE DVM TO MEASURE VOLTAGES AND CHECK CONTINUITY  
S USE OSCILLOSCOPE TO CHECK VOLTAGES AND PULSE CHARACTERISTICS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY AC CIRCUIT THEORY OF OPERATION  
K APPLY CAPACITOR THEORY OF OPERATION  
K APPLY DC CIRCUIT THEORY OF OPERATION  
K APPLY ESD PRECAUTIONS

**KNOWLEDGE:**

K APPLY LRU THEORY OF OPERATION  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY RELAY THEORY OF OPERATION  
 K APPLY RESISTOR THEORY OF OPERATION  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY SOLID STATE DIODE THEORY OF OPERATION  
 K APPLY TECHNICAL DATA  
 K APPLY TRANSISTOR AMPLIFIER CIRCUIT THEORY OF OPERATION  
 K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING  
 K DETERMINE WHETHER MALFUNCTION IS IN TEST STATION, LRU, OR ADAPTER (TASK NUMBER: 61360)  
 K ISOLATE FAULTY AC CIRCUITS  
 K ISOLATE FAULTY CAPACITORS  
 K ISOLATE FAULTY DC CIRCUITS  
 K ISOLATE FAULTY RELAYS  
 K ISOLATE FAULTY RESISTORS  
 K ISOLATE FAULTY SOLID STATE DIODES  
 K ISOLATE FAULTY TRANSISTOR AMPLIFIER CIRCUITS  
 K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)  
 K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
 K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
 K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | S 652         |            | 5          | 10         | 12       | 5        | 5.96       |     |
| 451X6B | S 652         |            | 0          | 0          | 0        | 5        | 5.96       |     |
| 451X6  | S 652         |            | 3          | 5          | 6        | 5        | 5.96       |     |
| 451X6A | S 659         |            | 16         | 13         | 12       | 4        | 5.44       |     |
| 451X6B | S 659         |            | 0          | 0          | 1        | 4        | 5.44       |     |
| 451X6  | S 659         |            | 9          | 7          | 7        | 4        | 5.44       |     |
| 451X6A | S 662         |            | 11         | 14         | 13       | 3        | 5.79       |     |
| 451X6B | S 662         |            | 0          | 0          | 0        | 3        | 5.79       |     |
| 451X6  | S 662         |            | 6          | 7          | 7        | 3        | 5.79       |     |
| 451X6A | S 665         |            | 3          | 2          | 1        | 0        | 5.69       |     |
| 451X6B | S 665         |            | 0          | 0          | 0        | 0        | 5.69       |     |
| 451X6  | S 665         |            | 2          | 1          | 1        | 0        | 5.69       |     |
| 451X6A | S 666         |            | 5          | 9          | 8        | 1        | 5.33       |     |
| 451X6B | S 666         |            | 0          | 0          | 1        | 1        | 5.33       |     |
| 451X6  | S 666         |            | 3          | 5          | 5        | 1        | 5.33       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | S 672         |            | 3          | 1          | 0        | 0        | 5.20       |     |
| 451X6B | S 672         |            | 0          | 0          | 0        | 0        | 5.20       |     |
| 451X6  | S 672         |            | 2          | 1          | 0        | 0        | 5.20       |     |
| 451X6A | S 677         |            | 0          | 0          | 3        | 2        | 5.26       |     |
| 451X6B | S 677         |            | 0          | 0          | 0        | 2        | 5.26       |     |
| 451X6  | S 677         |            | 0          | 0          | 1        | 2        | 5.26       |     |
| 451X6A | S 678         |            | 26         | 22         | 19       | 7        | 5.99       |     |
| 451X6B | S 678         |            | 0          | 0          | 2        | 7        | 5.99       |     |
| 451X6  | S 678         |            | 15         | 11         | 11       | 7        | 5.99       |     |
| 451X6A | S 679         |            | 18         | 18         | 16       | 7        | 6.27       |     |
| 451X6B | S 679         |            | 0          | 0          | 0        | 7        | 6.27       |     |
| 451X6  | S 679         |            | 11         | 9          | 9        | 7        | 6.27       |     |
| 451X6A | S 680         |            | 18         | 18         | 16       | 5        | 5.05       |     |
| 451X6B | S 680         |            | 0          | 0          | 1        | 5        | 5.05       |     |
| 451X6  | S 680         |            | 12         | 10         | 9        | 5        | 5.05       |     |
| 451X6A | S 685         |            | 13         | 16         | 15       | 4        | 4.95       |     |
| 451X6B | S 685         |            | 0          | 0          | 0        | 4        | 4.95       |     |
| 451X6  | S 685         |            | 8          | 8          | 8        | 4        | 4.95       |     |
| 451X6A | S 692         |            | 3          | 3          | 6        | 2        | 4.93       |     |
| 451X6B | S 692         |            | 0          | 0          | 0        | 2        | 4.93       |     |
| 451X6  | S 692         |            | 2          | 2          | 3        | 2        | 4.93       |     |
| 451X6A | S 695         |            | 8          | 10         | 12       | 2        | 5.40       |     |
| 451X6B | S 695         |            | 0          | 0          | 0        | 2        | 5.40       |     |
| 451X6  | S 695         |            | 5          | 5          | 6        | 2        | 5.40       |     |
| 451X6A | S 696         |            | 0          | 0          | 0        | 0        | 5.54       |     |
| 451X6B | S 696         |            | 0          | 0          | 0        | 0        | 5.54       |     |
| 451X6  | S 696         |            | 0          | 0          | 0        | 0        | 5.54       |     |
| 451X6A | S 698         |            | 5          | 3          | 1        | 0        | 5.50       |     |
| 451X6B | S 698         |            | 0          | 0          | 0        | 0        | 5.50       |     |
| 451X6  | S 698         |            | 3          | 2          | 1        | 0        | 5.50       |     |
| 451X6A | S 699         |            | 13         | 21         | 18       | 8        | 4.76       |     |
| 451X6B | S 699         |            | 0          | 0          | 0        | 8        | 4.76       |     |
| 451X6  | S 699         |            | 8          | 11         | 9        | 8        | 4.76       |     |
| 451X6A | S 702         |            | 13         | 18         | 16       | 4        | 6.07       |     |
| 451X6B | S 702         |            | 0          | 0          | 0        | 4        | 6.07       |     |
| 451X6  | S 702         |            | 8          | 9          | 8        | 4        | 6.07       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | S 710         |            | 3          | 1          | 4        | 1        | 5.85       |     |
| 451X6B | S 710         |            | 0          | 0          | 0        | 1        | 5.85       |     |
| 451X6  | S 710         |            | 2          | 1          | 2        | 1        | 5.85       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
S 652 ISOLATE MALFUNCTIONS IN AJN-16 NAVIGATION COMPUTER UNITS  
S 659 ISOLATE MALFUNCTIONS IN ARS ANTENNAS OTHER THAN F-111D  
S 662 ISOLATE MALFUNCTIONS IN ATTACK RADAR SET ELECTRICAL  
SYNCHRONIZERS  
S 665 ISOLATE MALFUNCTIONS IN AYK-6 GENERAL PURPOSE COMPUTERS  
S 666 ISOLATE MALFUNCTIONS IN BALLISTIC COMPUTER UNITS (BCU)  
S 672 ISOLATE MALFUNCTIONS IN DIGITAL DOPPLER PROCESSING UNITS  
S 677 ISOLATE MALFUNCTIONS IN F-111D TF AMP/PSs TO SRU COMPONENT  
S 678 ISOLATE MALFUNCTIONS IN FEEL AND TRIM ASSEMBLIES  
S 679 ISOLATE MALFUNCTIONS IN FEEL AND TRIM ASSEMBLY SRUs  
S 680 ISOLATE MALFUNCTIONS IN FLIGHT CONTROL COMPUTERS  
S 685 ISOLATE MALFUNCTIONS IN INTERFERENCE BLANKERS  
S 692 ISOLATE MALFUNCTIONS IN MCUs  
S 695 ISOLATE MALFUNCTIONS IN NAVIGATION DISPLAY UNITS  
S 696 ISOLATE MALFUNCTIONS IN RADAR INDICATORS (RI)  
S 698 ISOLATE MALFUNCTIONS IN SDCs  
S 699 ISOLATE MALFUNCTIONS IN SIS COMPUTERS  
S 702 ISOLATE MALFUNCTIONS IN TF COMPUTERS  
S 710 ISOLATE MALFUNCTIONS IN WEAPONS NAVIGATION COMPUTERS (WNC)/  
MISSION COMPUTERS (MC)

**TASK NUMBER: 60370**

**TASK STATEMENT:**

REPAIR DIGITAL TYPE LRUs

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES

CTK

ESD PROTECTIVE EQUIPMENT

TEST STATION

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN SRUs

A CLEAN CONTACTS (F 210)

A ORDER PARTS

A REPAIR WIRING (TASK NUMBER: 61440)

A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)

A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)

A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)

A RESEAT SRUs

**SKILLS:**

S INSTALL EXTENDER BOARDS

S OPERATE TEST STATION

S PERFORM VISUAL INSPECTIONS

S USE COMMON HANDTOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS

K APPLY ESD PRECAUTIONS

K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS

**KNOWLEDGE:**

K APPLY SHOP SAFETY PROCEDURES  
 K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | S 614         |            | 5          | 7          | 12       | 4        | 5.17       |     |
| 451X6B | S 614         |            | 0          | 0          | 1        | 4        | 5.17       |     |
| 451X6  | S 614         |            | 3          | 3          | 6        | 4        | 5.17       |     |
| 451X6A | S 616         |            | 11         | 11         | 13       | 3        | 5.66       |     |
| 451X6B | S 616         |            | 0          | 0          | 0        | 3        | 5.66       |     |
| 451X6  | S 616         |            | 6          | 6          | 7        | 3        | 5.66       |     |
| 451X6A | S 617         |            | 3          | 3          | 2        | 0        | 5.14       |     |
| 451X6B | S 617         |            | 0          | 0          | 0        | 0        | 5.14       |     |
| 451X6  | S 617         |            | 2          | 2          | 1        | 0        | 5.14       |     |
| 451X6A | S 625         |            | 3          | 2          | 3        | 2        | 5.10       |     |
| 451X6B | S 625         |            | 0          | 0          | 0        | 2        | 5.10       |     |
| 451X6  | S 625         |            | 2          | 1          | 1        | 2        | 5.10       |     |
| 451X6A | S 626         |            | 21         | 17         | 16       | 6        | 5.41       |     |
| 451X6B | S 626         |            | 0          | 0          | 2        | 6        | 5.41       |     |
| 451X6  | S 626         |            | 12         | 8          | 9        | 6        | 5.41       |     |
| 451X6A | S 627         |            | 3          | 3          | 4        | 1        | 4.80       |     |
| 451X6B | S 627         |            | 0          | 0          | 0        | 1        | 4.80       |     |
| 451X6  | S 627         |            | 2          | 2          | 2        | 1        | 4.80       |     |
| 451X6A | S 632         |            | 13         | 16         | 14       | 2        | 4.55       |     |
| 451X6B | S 632         |            | 0          | 0          | 0        | 2        | 4.55       |     |
| 451X6  | S 632         |            | 8          | 8          | 8        | 2        | 4.55       |     |
| 451X6A | S 635         |            | 3          | 1          | 3        | 1        | 5.02       |     |
| 451X6B | S 635         |            | 0          | 0          | 0        | 1        | 5.02       |     |
| 451X6  | S 635         |            | 2          | 1          | 1        | 1        | 5.02       |     |
| 451X6A | S 640         |            | 3          | 2          | 2        | 0        | 4.75       |     |
| 451X6B | S 640         |            | 0          | 0          | 0        | 0        | 4.75       |     |
| 451X6  | S 640         |            | 2          | 1          | 1        | 0        | 4.75       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | S 642         |            | 13         | 20         | 16       | 6        | 4.78       |     |
| 451X6B | S 642         |            | 0          | 0          | 0        | 6        | 4.78       |     |
| 451X6  | S 642         |            | 8          | 10         | 9        | 6        | 4.78       |     |
| 451X6A | S 643         |            | 16         | 19         | 16       | 4        | 6.52       |     |
| 451X6B | S 643         |            | 0          | 0          | 0        | 4        | 6.52       |     |
| 451X6  | S 643         |            | 9          | 10         | 8        | 4        | 6.52       |     |
| 451X6A | S 773         |            | 8          | 12         | 12       | 4        | 3.90       |     |
| 451X6B | S 773         |            | 0          | 0          | 0        | 4        | 3.90       |     |
| 451X6  | S 773         |            | 5          | 6          | 6        | 4        | 3.90       |     |
| 451X6A | S 781         |            | 13         | 12         | 15       | 5        | 4.81       |     |
| 451X6B | S 781         |            | 0          | 0          | 2        | 5        | 4.81       |     |
| 451X6  | S 781         |            | 8          | 6          | 9        | 5        | 4.81       |     |
| 451X6A | S 783         |            | 8          | 12         | 12       | 2        | 3.94       |     |
| 451X6B | S 783         |            | 0          | 0          | 0        | 2        | 3.94       |     |
| 451X6  | S 783         |            | 5          | 6          | 6        | 2        | 3.94       |     |
| 451X6A | S 787         |            | 3          | 2          | 1        | 0        | 3.56       |     |
| 451X6B | S 787         |            | 0          | 0          | 0        | 0        | 3.56       |     |
| 451X6  | S 787         |            | 2          | 1          | 0        | 0        | 3.56       |     |
| 451X6A | S 788         |            | 3          | 2          | 1        | 0        | 3.73       |     |
| 451X6B | S 788         |            | 0          | 0          | 0        | 0        | 3.73       |     |
| 451X6  | S 788         |            | 2          | 1          | 1        | 0        | 3.73       |     |
| 451X6A | S 789         |            | 8          | 6          | 6        | 1        | 3.66       |     |
| 451X6B | S 789         |            | 0          | 0          | 0        | 1        | 3.66       |     |
| 451X6  | S 789         |            | 5          | 3          | 3        | 1        | 3.66       |     |
| 451X6A | S 794         |            | 0          | 0          | 0        | 0        | 4.47       |     |
| 451X6B | S 794         |            | 0          | 0          | 0        | 0        | 4.47       |     |
| 451X6  | S 794         |            | 0          | 0          | 0        | 0        | 4.47       |     |
| 451X6A | S 796         |            | 3          | 1          | 0        | 0        | 4.06       |     |
| 451X6B | S 796         |            | 0          | 0          | 0        | 0        | 4.06       |     |
| 451X6  | S 796         |            | 2          | 1          | 0        | 0        | 4.06       |     |
| 451X6A | S 797         |            | 0          | 0          | 1        | 0        | 3.96       |     |
| 451X6B | S 797         |            | 0          | 0          | 0        | 0        | 3.96       |     |
| 451X6  | S 797         |            | 0          | 0          | 1        | 0        | 3.96       |     |
| 451X6A | S 805         |            | 26         | 22         | 18       | 7        | 4.74       |     |
| 451X6B | S 805         |            | 0          | 0          | 2        | 7        | 4.74       |     |
| 451X6  | S 805         |            | 15         | 11         | 11       | 7        | 4.74       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | S 806         |            | 29         | 23         | 18       | 7        | 4.83       |     |
| 451X6B | S 806         |            | 0          | 0          | 2        | 7        | 4.83       |     |
| 451X6  | S 806         |            | 17         | 12         | 10       | 7        | 4.83       |     |
| 451X6A | S 807         |            | 26         | 22         | 18       | 5        | 3.50       |     |
| 451X6B | S 807         |            | 0          | 0          | 1        | 5        | 3.50       |     |
| 451X6  | S 807         |            | 17         | 12         | 10       | 5        | 3.50       |     |
| 451X6A | S 812         |            | 13         | 16         | 14       | 3        | 3.59       |     |
| 451X6B | S 812         |            | 0          | 0          | 0        | 3        | 3.59       |     |
| 451X6  | S 812         |            | 8          | 8          | 7        | 3        | 3.59       |     |
| 451X6A | S 814         |            | 8          | 13         | 14       | 3        | 3.62       |     |
| 451X6B | S 814         |            | 0          | 0          | 0        | 3        | 3.62       |     |
| 451X6  | S 814         |            | 5          | 7          | 8        | 3        | 3.62       |     |
| 451X6A | S 822         |            | 3          | 3          | 5        | 2        | 4.04       |     |
| 451X6B | S 822         |            | 0          | 0          | 0        | 2        | 4.04       |     |
| 451X6  | S 822         |            | 2          | 2          | 3        | 2        | 4.04       |     |
| 451X6A | S 827         |            | 5          | 8          | 8        | 3        | 4.16       |     |
| 451X6B | S 827         |            | 0          | 0          | 0        | 3        | 4.16       |     |
| 451X6  | S 827         |            | 3          | 4          | 4        | 3        | 4.16       |     |
| 451X6A | S 828         |            | 11         | 11         | 10       | 2        | 3.75       |     |
| 451X6B | S 828         |            | 0          | 0          | 0        | 2        | 3.75       |     |
| 451X6  | S 828         |            | 6          | 6          | 5        | 2        | 3.75       |     |
| 451X6A | S 829         |            | 0          | 0          | 0        | 0        | 4.87       |     |
| 451X6B | S 829         |            | 0          | 0          | 0        | 0        | 4.87       |     |
| 451X6  | S 829         |            | 0          | 0          | 0        | 0        | 4.87       |     |
| 451X6A | S 830         |            | 0          | 0          | 0        | 0        | 4.64       |     |
| 451X6B | S 830         |            | 0          | 0          | 0        | 0        | 4.64       |     |
| 451X6  | S 830         |            | 0          | 0          | 0        | 0        | 4.64       |     |
| 451X6A | S 833         |            | 0          | 2          | 2        | 0        | 4.49       |     |
| 451X6B | S 833         |            | 0          | 0          | 0        | 0        | 4.49       |     |
| 451X6  | S 833         |            | 0          | 1          | 1        | 0        | 4.49       |     |
| 451X6A | S 834         |            | 11         | 19         | 16       | 5        | 3.39       |     |
| 451X6B | S 834         |            | 0          | 0          | 0        | 5        | 3.39       |     |
| 451X6  | S 834         |            | 6          | 10         | 9        | 5        | 3.39       |     |
| 451X6A | S 837         |            | 11         | 14         | 14       | 3        | 4.38       |     |
| 451X6B | S 837         |            | 0          | 0          | 0        | 3        | 4.38       |     |
| 451X6  | S 837         |            | 6          | 7          | 8        | 3        | 4.38       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | S 838         |            | 8          | 12         | 14       | 4        | 3.96       |     |
| 451X6B | S 838         |            | 0          | 0          | 0        | 4        | 3.96       |     |
| 451X6  | S 838         |            | 5          | 6          | 7        | 4        | 3.96       |     |
| 451X6A | S 850         |            | 0          | 1          | 2        | 0        | 3.98       |     |
| 451X6B | S 850         |            | 0          | 0          | 0        | 0        | 3.98       |     |
| 451X6  | S 850         |            | 0          | 1          | 1        | 0        | 3.98       |     |
| 451X6A | T 871         |            | 0          | 0          | 0        | 0        | 4.43       |     |
| 451X6B | T 871         |            | 0          | 0          | 0        | 0        | 4.43       |     |
| 451X6  | T 871         |            | 0          | 0          | 0        | 0        | 4.43       |     |
| 451X6A | T 872         |            | 0          | 0          | 0        | 0        | 4.09       |     |
| 451X6B | T 872         |            | 0          | 0          | 0        | 0        | 4.09       |     |
| 451X6  | T 872         |            | 0          | 0          | 0        | 0        | 4.09       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
 F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
 LINE REPLACEABLE UNITS (LRU)  
 S 614 ALIGN ARS ANTENNAS OTHER THAN F-111D ARS ANTENNAS  
 S 616 ALIGN ATTACK RADAR SET ELECTRICAL SYNCHRONIZERS  
 S 617 ALIGN AYK-6 GENERAL PURPOSE COMPUTERS  
 S 625 ALIGN F-111D TERRAIN FOLLOWING AMPLIFIER - POWER SUPPLIES  
 S 626 ALIGN FEEL AND TRIM ASSEMBLIES  
 S 627 ALIGN FLIGHT DIRECTOR COMPUTERS (FDC)  
 S 632 ALIGN INTERFERENCE BLANKERS  
 S 635 ALIGN MAINTENANCE CONTROL UNITS (MCU)  
 S 640 ALIGN SIGNAL DATA CONVERTERS (SDC)  
 S 642 ALIGN STALL INHIBITOR SYSTEM (SIS) COMPUTERS  
 S 643 ALIGN TERRAIN FOLLOWING (TF) COMPUTERS  
 S 773 REMOVE OR REPLACE AJN-16 NAVIGATION COMPUTER UNIT SRUs  
 S 781 REMOVE OR REPLACE ARS ANTENNA COMPONENTS OTHER THAN F-111D  
 S 783 REMOVE OR REPLACE ARS ELECTRICAL SYNCHRONIZER SRUs  
 S 787 REMOVE OR REPLACE AYK-6 GENERAL PURPOSE COMPUTER COMPONENTS  
 S 788 REMOVE OR REPLACE AYK-6 GENERAL PURPOSE COMPUTER SRUs  
 S 789 REMOVE OR REPLACE BCU SRUs  
 S 794 REMOVE OR REPLACE CONVERTER SET COMPONENTS  
 S 796 REMOVE OR REPLACE DDPU COMPONENTS  
 S 797 REMOVE OR REPLACE DDPU SRUs  
 S 805 REMOVE OR REPLACE FEEL AND TRIM ASSEMBLY COMPONENTS  
 S 806 REMOVE OR REPLACE FEEL AND TRIM ASSEMBLY SRUs  
 S 807 REMOVE OR REPLACE FLIGHT CONTROL COMPUTER SRUs  
 S 812 REMOVE OR REPLACE INTERFERENCE BLANKER POWER SUPPLIES  
 S 814 REMOVE OR REPLACE INTERFERENCE BLANKER SRUs  
 S 822 REMOVE OR REPLACE MCU SRUs  
 S 827 REMOVE OR REPLACE NAVIGATION DISPLAY UNIT COMPONENTS  
 S 828 REMOVE OR REPLACE NAVIGATION DISPLAY UNIT SRUs  
 S 829 REMOVE OR REPLACE RI COMPONENTS

**USAF JOB INVENTORY TASK STATEMENTS:**

S 830 REMOVE OR REPLACE RI SRUs  
S 833 REMOVE OR REPLACE SDCs  
S 834 REMOVE OR REPLACE SIS COMPUTER SRUs  
S 837 REMOVE OR REPLACE TF COMPUTER COMPONENTS  
S 838 REMOVE OR REPLACE TF COMPUTER SRUs  
S 850 REMOVE OR REPLACE WNC/MCs  
T 871 REMOVE OR REPLACE HSDP COMPONENTS  
T 872 REMOVE OR REPLACE HSDP SRUs

**TASK NUMBER:** 60380

**TASK STATEMENT:** .

PERFORM OPERATIONAL TESTS ON ANALOG TYPE LRUs

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
TEST STATION

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR; FUNCTIONAL CHECK; NEW  
ISSUE FROM SUPPLY

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CALL UP TAPE  
A EXECUTE TEST

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S CONNECT LRU TO TEST STATION  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 243         |            | 61         | 62         | 65       | 39       | 4.32       |     |
| 451X6B | F 243         |            | 50         | 60         | 59       | 39       | 4.32       |     |
| 451X6  | F 243         |            | 55         | 60         | 62       | 39       | 4.32       |     |
| 451X6A | S 701         |            | 5          | 9          | 12       | 4        | 5.03       |     |
| 451X6B | S 701         |            | 0          | 0          | 1        | 4        | 5.03       |     |
| 451X6  | S 701         |            | 3          | 5          | 6        | 4        | 5.03       |     |
| 451X6A | S 713         |            | 11         | 9          | 7        | 1        | 4.11       |     |
| 451X6B | S 713         |            | 0          | 0          | 1        | 1        | 4.11       |     |
| 451X6  | S 713         |            | 6          | 5          | 4        | 1        | 4.11       |     |
| 451X6A | S 735         |            | 5          | 10         | 14       | 5        | 4.73       |     |
| 451X6B | S 735         |            | 0          | 0          | 0        | 5        | 4.73       |     |
| 451X6  | S 735         |            | 3          | 5          | 8        | 5        | 4.73       |     |
| 451X6A | S 748         |            | 5          | 9          | 14       | 4        | 5.36       |     |
| 451X6B | S 748         |            | 0          | 0          | 0        | 4        | 5.36       |     |
| 451X6  | S 748         |            | 3          | 5          | 7        | 4        | 5.36       |     |
| 451X6A | S 759         |            | 13         | 13         | 16       | 5        | 4.57       |     |
| 451X6B | S 759         |            | 0          | 0          | 0        | 5        | 4.57       |     |
| 451X6  | S 759         |            | 8          | 7          | 9        | 5        | 4.57       |     |
| 451X6A | S 763         |            | 0          | 2          | 4        | 0        | 5.32       |     |
| 451X6B | S 763         |            | 0          | 0          | 0        | 0        | 5.32       |     |
| 451X6  | S 763         |            | 0          | 1          | 2        | 0        | 5.32       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 243 PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECTION (T AND I)  
OF LRU<sub>s</sub> ISSUED FROM SUPPLY

S 701 ISOLATE MALFUNCTIONS IN TF AMP/PS<sub>s</sub> TO SRU

S 713 PERFORM OPERATIONAL TESTS OF AJQ-20 NCUs

S 735 PERFORM OPERATIONAL TESTS OF DISPLACEMENT GYROSCOPES

S 748 PERFORM OPERATIONAL TESTS OF IRUs

S 759 PERFORM OPERATIONAL TESTS OF RATE GYROSCOPES/ACCELEROMETERS

S 763 PERFORM OPERATIONAL TESTS OF SPU<sub>s</sub>

**TASK NUMBER: 60390**

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN ANALOG TYPE LRUs

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CALIBRATION MONITOR UNIT  
CTK  
TEST STATION

**REFERENCES:**

APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
APPLICABLE SHOP SYSTEMS TO  
APPLICABLE TEST PROCEDURES TO

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S INSTALL EXTENDER BOARDS  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S USE CALIBRATION MONITOR UNIT  
S USE COMMON HANDTOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY LRU THEORY OF OPERATION  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING  
K DETERMINE WHETHER MALFUNCTION IS IN TEST STATION, LRU, OR  
ADAPTER (TASK NUMBER: 61360)  
K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION  
PROCEDURES (F 278)

**KNOWLEDGE:**

K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | S 653         |            | 11         | 10         | 7        | 1        | 5.52       |     |
| 451X6B | S 653         |            | 0          | 0          | 1        | 1        | 5.52       |     |
| 451X6  | S 653         |            | 6          | 5          | 4        | 1        | 5.52       |     |
| 451X6A | S 686         |            | 5          | 9          | 14       | 4        | 7.30       |     |
| 451X6B | S 686         |            | 0          | 0          | 0        | 4        | 7.30       |     |
| 451X6  | S 686         |            | 3          | 5          | 7        | 4        | 7.30       |     |
| 451X6A | S 700         |            | 0          | 4          | 6        | 1        | 6.29       |     |
| 451X6B | S 700         |            | 0          | 0          | 0        | 1        | 6.29       |     |
| 451X6  | S 700         |            | 0          | 2          | 3        | 1        | 6.29       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
S 653 ISOLATE MALFUNCTIONS IN AJQ-20 NCUs  
S 686 ISOLATE MALFUNCTIONS IN IRUs  
S 700 ISOLATE MALFUNCTIONS IN STABILIZED PLATFORM UNITS TO SRU OR  
COMPONENT LEVEL

**TASK NUMBER: 60400**

**TASK STATEMENT: .**

REPAIR ANALOG TYPE LRUs

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES  
CTK  
TEST STATION

**REFERENCES:**

APPLICABLE IPB  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
APPLICABLE TEST PROCEDURES TO

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN SRUs  
A CLEAN CONTACTS (F 210)  
A ORDER PARTS  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)  
A REPAIR WIRING (TASK NUMBER: 61440)  
A RESEAT SRUs

**SKILLS:**

S INSTALL EXTENDER BOARDS  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | S 610         |            | 0          | 0          | 0        | 0        | 4.61       |     |
| 451X6B | S 610         |            | 0          | 0          | 0        | 0        | 4.61       |     |
| 451X6  | S 610         |            | 0          | 0          | 0        | 0        | 4.61       |     |
| 451X6A | S 630         |            | 5          | 9          | 10       | 4        | 5.87       |     |
| 451X6B | S 630         |            | 0          | 0          | 0        | 4        | 5.87       |     |
| 451X6  | S 630         |            | 3          | 5          | 5        | 4        | 5.87       |     |
| 451X6A | S 641         |            | 0          | 3          | 6        | 1        | 6.00       |     |
| 451X6B | S 641         |            | 0          | 0          | 0        | 1        | 6.00       |     |
| 451X6  | S 641         |            | 0          | 2          | 3        | 1        | 6.00       |     |
| 451X6A | S 648         |            | 3          | 6          | 11       | 4        | 5.34       |     |
| 451X6B | S 648         |            | 0          | 0          | 0        | 4        | 5.34       |     |
| 451X6  | S 648         |            | 2          | 3          | 6        | 4        | 5.34       |     |
| 451X6A | S 774         |            | 8          | 9          | 8        | 1        | 3.81       |     |
| 451X6B | S 774         |            | 0          | 0          | 0        | 1        | 3.81       |     |
| 451X6  | S 774         |            | 6          | 5          | 5        | 1        | 3.81       |     |
| 451X6A | S 815         |            | 8          | 10         | 13       | 5        | 5.60       |     |
| 451X6B | S 815         |            | 0          | 0          | 0        | 5        | 5.60       |     |
| 451X6  | S 815         |            | 5          | 5          | 7        | 5        | 5.60       |     |
| 451X6A | S 816         |            | 8          | 10         | 13       | 4        | 4.98       |     |
| 451X6B | S 816         |            | 0          | 0          | 0        | 4        | 4.98       |     |
| 451X6  | S 816         |            | 5          | 5          | 7        | 4        | 4.98       |     |
| 451X6A | S 835         |            | 0          | 2          | 4        | 0        | 4.34       |     |
| 451X6B | S 835         |            | 0          | 0          | 0        | 0        | 4.34       |     |
| 451X6  | S 835         |            | 0          | 1          | 2        | 0        | 4.34       |     |
| 451X6A | S 836         |            | 0          | 1          | 4        | 0        | 4.21       |     |
| 451X6B | S 836         |            | 0          | 0          | 0        | 0        | 4.21       |     |
| 451X6  | S 836         |            | 0          | 1          | 2        | 0        | 4.21       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS

F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
LINE REPLACEABLE UNITS (LRU)

S 610 ALIGN ACCELEROMETER SIGNAL SIMULATORS

**USAF JOB INVENTORY TASK STATEMENTS:**

- S 630 ALIGN INERTIAL REFERENCE UNIT (IRU) OR INERTIAL NAVIGATION  
SYSTEMS (INS) TEST SETS
- S 641 ALIGN STABILIZED PLATFORM UNITS (SPU)
- S 648 CALIBRATE IRUs
- S 774 REMOVE OR REPLACE AJQ-20 NCU SRUs
- S 815 REMOVE OR REPLACE IRU COMPONENTS
- S 816 REMOVE OR REPLACE IRU SRUs
- S 835 REMOVE OR REPLACE SPU COMPONENTS
- S 836 REMOVE OR REPLACE SPU SRUs

**TASK NUMBER:** 60410

**TASK STATEMENT:**

PERFORM OPERATIONAL TESTS ON DISPLAY TYPE LRU<sub>s</sub>

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
ESD PROTECTIVE EQUIPMENT  
TEST STATION

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR; NEW ISSUE FROM SUPPLY;  
FUNCTIONAL CHECK

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CALL UP TAPE  
A EXECUTE TEST

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S CONNECT LRU TO TEST STATION  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY ESD PRECAUTIONS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

# RELATED OCCUPATIONAL SURVEY DATA:

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 243         |            | 61         | 62         | 65       | 39       | 4.32       |     |
| 451X6B | F 243         |            | 50         | 60         | 59       | 39       | 4.32       |     |
| 451X6  | F 243         |            | 55         | 60         | 62       | 39       | 4.32       |     |
| 451X6A | S 744         |            | 8          | 9          | 10       | 2        | 4.93       |     |
| 451X6B | S 744         |            | 0          | 0          | 0        | 2        | 4.93       |     |
| 451X6  | S 744         |            | 5          | 5          | 5        | 2        | 4.93       |     |
| 451X6A | S 753         |            | 0          | 3          | 6        | 1        | 4.57       |     |
| 451X6B | S 753         |            | 0          | 0          | 0        | 1        | 4.57       |     |
| 451X6  | S 753         |            | 0          | 2          | 4        | 1        | 4.57       |     |
| 451X6A | S 765         |            | 11         | 19         | 18       | 5        | 4.58       |     |
| 451X6B | S 765         |            | 0          | 0          | 0        | 5        | 4.58       |     |
| 451X6  | S 765         |            | 6          | 10         | 10       | 5        | 4.58       |     |
| 451X6A | T 860         |            | 5          | 2          | 2        | 0        | 4.77       |     |
| 451X6B | T 860         |            | 0          | 0          | 0        | 0        | 4.77       |     |
| 451X6  | T 860         |            | 3          | 1          | 1        | 0        | 4.77       |     |
| 451X6A | T 862         |            | 3          | 1          | 1        | 0        | 4.97       |     |
| 451X6B | T 862         |            | 0          | 0          | 0        | 0        | 4.97       |     |
| 451X6  | T 862         |            | 2          | 1          | 1        | 0        | 4.97       |     |
| 451X6A | T 863         |            | 0          | 0          | 0        | 0        | 4.77       |     |
| 451X6B | T 863         |            | 0          | 0          | 0        | 0        | 4.77       |     |
| 451X6  | T 863         |            | 0          | 0          | 0        | 0        | 4.77       |     |
| 451X6A | T 864         |            | 0          | 0          | 0        | 0        | 4.71       |     |
| 451X6B | T 864         |            | 0          | 0          | 0        | 0        | 4.71       |     |
| 451X6  | T 864         |            | 0          | 0          | 0        | 0        | 4.71       |     |
| 451X6A | T 865         |            | 0          | 0          | 0        | 0        | 4.95       |     |
| 451X6B | T 865         |            | 0          | 0          | 0        | 0        | 4.95       |     |
| 451X6  | T 865         |            | 0          | 0          | 0        | 0        | 4.95       |     |

## USAF JOB INVENTORY TASK STATEMENTS:

F 243 PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECTION (T AND I)  
OF LRU<sub>s</sub> ISSUED FROM SUPPLY

S 744 PERFORM OPERATIONAL TESTS OF INDICATOR RECORDERS

S 753 PERFORM OPERATIONAL TESTS OF LCOS<sub>s</sub> OPTICAL DISPLAY SIGHTS

S 765 PERFORM OPERATIONAL TESTS OF TF INDICATORS

T 860 PERFORM OPERATIONAL TESTS OF HORIZONTAL SITUATION DISPLAY  
INDICATORS (HSDI)

T 862 PERFORM OPERATIONAL TESTS OF HEAD UP DISPLAY (HUD) UNITS

T 863 PERFORM OPERATIONAL TESTS OF MSD<sub>s</sub>

T 864 PERFORM OPERATIONAL TESTS OF RDC<sub>s</sub>

T 865 PERFORM OPERATIONAL TESTS OF VSD<sub>s</sub>

**TASK NUMBER: 60420**

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN DISPLAY TYPE LRUs

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
ESD PROTECTIVE EQUIPMENT  
TEST STATION

**REFERENCES:**

APPLICABLE SHOP SYSTEMS TO  
APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S INSTALL EXTENDER BOARDS  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY ELECTRON TUBE AMPLIFIER THEORY OF OPERATION  
K APPLY ESD PRECAUTIONS  
K APPLY LRU THEORY OF OPERATION  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY PHOTOSENSITIVE DEVICE THEORY OF OPERATION  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K DETERMINE WHETHER MALFUNCTION IS IN TEST STATION, LRU, OR  
ADAPTER (TASK NUMBER: 61360)  
K ISOLATE FAULTY ELECTRON TUBE AMPLIFIERS

**KNOWLEDGE:**

K ISOLATE FAULTY PHOTOSENSITIVE DEVICES  
K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION  
PROCEDURES (F 278)  
K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | S 681         |            | 5          | 3          | 1        | 1        | 5.11       |     |
| 451X6B | S 681         |            | 0          | 0          | 0        | 1        | 5.11       |     |
| 451X6  | S 681         |            | 3          | 2          | 0        | 1        | 5.11       |     |
| 451X6A | S 682         |            | 8          | 10         | 9        | 2        | 5.80       |     |
| 451X6B | S 682         |            | 0          | 0          | 0        | 2        | 5.80       |     |
| 451X6  | S 682         |            | 5          | 5          | 5        | 2        | 5.80       |     |
| 451X6A | S 703         |            | 11         | 18         | 17       | 4        | 5.25       |     |
| 451X6B | S 703         |            | 0          | 0          | 0        | 4        | 5.25       |     |
| 451X6  | S 703         |            | 6          | 9          | 9        | 4        | 5.25       |     |
| 451X6A | S 709         |            | 5          | 4          | 3        | 0        | 5.41       |     |
| 451X6B | S 709         |            | 0          | 0          | 0        | 0        | 5.41       |     |
| 451X6  | S 709         |            | 3          | 2          | 1        | 0        | 5.41       |     |
| 451X6A | T 855         |            | 0          | 0          | 0        | 0        | 5.39       |     |
| 451X6B | T 855         |            | 0          | 0          | 0        | 0        | 5.39       |     |
| 451X6  | T 855         |            | 0          | 0          | 0        | 0        | 5.39       |     |
| 451X6A | T 856         |            | 0          | 0          | 0        | 0        | 5.53       |     |
| 451X6B | T 856         |            | 0          | 0          | 0        | 0        | 5.53       |     |
| 451X6  | T 856         |            | 0          | 0          | 0        | 0        | 5.53       |     |
| 451X6A | T 857         |            | 0          | 0          | 0        | 0        | 5.81       |     |
| 451X6B | T 857         |            | 0          | 0          | 0        | 0        | 5.81       |     |
| 451X6  | T 857         |            | 0          | 0          | 0        | 0        | 5.81       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
S 681 ISOLATE MALFUNCTIONS IN HUD UNITS  
S 682 ISOLATE MALFUNCTIONS IN INDICATOR RECORDERS  
S 703 ISOLATE MALFUNCTIONS IN TF INDICATORS  
S 709 ISOLATE MALFUNCTIONS IN VIDS  
T 855 ISOLATE MALFUNCTIONS IN MSDs  
T 856 ISOLATE MALFUNCTIONS IN RADAR DISPLAY CONTROLS (RDC)  
T 857 ISOLATE MALFUNCTIONS IN VSDs

**TASK NUMBER: 60430**

**TASK STATEMENT:**

REPAIR DISPLAY TYPE LRU#

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES  
CTK  
ESD PROTECTIVE EQUIPMENT  
MULTIMETER  
SOLDERING STATION  
TEST STATION

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
APPLICABLE IPB

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN SRU#  
A CLEAN CONTACTS (F 210)  
A ORDER PARTS  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE SRU# (TASK NUMBER: 61390)  
A REPAIR WIRING (TASK NUMBER: 61440)  
A RESEAT SRU#

**SKILLS:**

S INSTALL EXTENDER BOARDS  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S SOLDER OR DESOLDER PC BOARDS  
S USE COMMON HANDTOOLS  
S USE MULTIMETER TO CHECK CONTINUITY

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY ESD PRECAUTIONS  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | S 628         |            | 3          | 3          | 4        | 2        | 4.81       |     |
| 451X6B | S 628         |            | 0          | 0          | 0        | 2        | 4.81       |     |
| 451X6  | S 628         |            | 2          | 2          | 2        | 2        | 4.81       |     |
| 451X6A | S 629         |            | 5          | 8          | 8        | 3        | 5.74       |     |
| 451X6B | S 629         |            | 0          | 0          | 0        | 3        | 5.74       |     |
| 451X6  | S 629         |            | 3          | 4          | 4        | 3        | 5.74       |     |
| 451X6A | S 639         |            | 8          | 6          | 7        | 2        | 5.27       |     |
| 451X6B | S 639         |            | 0          | 0          | 0        | 2        | 5.27       |     |
| 451X6  | S 639         |            | 5          | 3          | 4        | 2        | 5.27       |     |
| 451X6A | S 645         |            | 16         | 20         | 17       | 5        | 5.88       |     |
| 451X6B | S 645         |            | 0          | 0          | 0        | 5        | 5.88       |     |
| 451X6  | S 645         |            | 9          | 10         | 9        | 5        | 5.88       |     |
| 451X6A | S 647         |            | 3          | 3          | 3        | 0        | 5.66       |     |
| 451X6B | S 647         |            | 0          | 0          | 0        | 0        | 5.66       |     |
| 451X6  | S 647         |            | 2          | 2          | 1        | 0        | 5.66       |     |
| 451X6A | S 808         |            | 8          | 9          | 10       | 2        | 4.80       |     |
| 451X6B | S 808         |            | 0          | 0          | 0        | 2        | 4.80       |     |
| 451X6  | S 808         |            | 5          | 5          | 5        | 2        | 4.80       |     |
| 451X6A | S 809         |            | 8          | 8          | 7        | 2        | 4.58       |     |
| 451X6B | S 809         |            | 0          | 0          | 0        | 2        | 4.58       |     |
| 451X6  | S 809         |            | 5          | 4          | 4        | 2        | 4.58       |     |
| 451X6A | S 839         |            | 11         | 17         | 15       | 4        | 4.35       |     |
| 451X6B | S 839         |            | 0          | 0          | 0        | 4        | 4.35       |     |
| 451X6  | S 839         |            | 6          | 8          | 8        | 4        | 4.35       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | S 840         |            | 8          | 12         | 13       | 4        | 4.04       |     |
| 451X6B | S 840         |            | 0          | 0          | 0        | 4        | 4.04       |     |
| 451X6  | S 840         |            | 5          | 6          | 7        | 4        | 4.04       |     |
| 451X6A | S 849         |            | 3          | 4          | 2        | 0        | 4.29       |     |
| 451X6B | S 849         |            | 0          | 0          | 0        | 0        | 4.29       |     |
| 451X6  | S 849         |            | 2          | 2          | 1        | 0        | 4.29       |     |
| 451X6A | T 851         |            | 0          | 0          | 0        | 0        | 5.75       |     |
| 451X6B | T 851         |            | 0          | 0          | 0        | 0        | 5.75       |     |
| 451X6  | T 851         |            | 0          | 0          | 0        | 0        | 5.75       |     |
| 451X6A | T 852         |            | 0          | 0          | 0        | 0        | 5.75       |     |
| 451X6B | T 852         |            | 0          | 0          | 0        | 0        | 5.75       |     |
| 451X6  | T 852         |            | 0          | 0          | 0        | 0        | 5.75       |     |
| 451X6A | T 869         |            | 0          | 0          | 0        | 0        | 4.86       |     |
| 451X6B | T 869         |            | 0          | 0          | 0        | 0        | 4.86       |     |
| 451X6  | T 869         |            | 0          | 0          | 0        | 0        | 4.86       |     |
| 451X6A | T 870         |            | 0          | 0          | 0        | 0        | 4.79       |     |
| 451X6B | T 870         |            | 0          | 0          | 0        | 0        | 4.79       |     |
| 451X6  | T 870         |            | 0          | 0          | 0        | 0        | 4.79       |     |
| 451X6A | T 873         |            | 5          | 2          | 1        | 0        | 4.57       |     |
| 451X6B | T 873         |            | 0          | 0          | 0        | 0        | 4.57       |     |
| 451X6  | T 873         |            | 3          | 1          | 0        | 0        | 4.57       |     |
| 451X6A | T 874         |            | 3          | 1          | 1        | 0        | 4.23       |     |
| 451X6B | T 874         |            | 0          | 0          | 0        | 0        | 4.23       |     |
| 451X6  | T 874         |            | 2          | 1          | 1        | 0        | 4.23       |     |
| 451X6A | T 877         |            | 0          | 0          | 0        | 0        | 4.81       |     |
| 451X6B | T 877         |            | 0          | 0          | 0        | 0        | 4.81       |     |
| 451X6  | T 877         |            | 0          | 0          | 0        | 0        | 4.81       |     |
| 451X6A | T 878         |            | 0          | 0          | 0        | 0        | 4.40       |     |
| 451X6B | T 878         |            | 0          | 0          | 0        | 0        | 4.40       |     |
| 451X6  | T 878         |            | 0          | 0          | 0        | 0        | 4.40       |     |
| 451X6A | T 879         |            | 0          | 0          | 0        | 0        | 4.69       |     |
| 451X6B | T 879         |            | 0          | 0          | 0        | 0        | 4.69       |     |
| 451X6  | T 879         |            | 0          | 0          | 0        | 0        | 4.69       |     |
| 451X6A | T 880         |            | 0          | 0          | 0        | 0        | 4.01       |     |
| 451X6B | T 880         |            | 0          | 0          | 0        | 0        | 4.01       |     |
| 451X6  | T 880         |            | 0          | 0          | 0        | 0        | 4.01       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | T 881         |            | 0          | 0          | 0        | 0        | 4.48       |     |
| 451X6B | T 881         |            | 0          | 0          | 0        | 0        | 4.48       |     |
| 451X6  | T 881         |            | 0          | 0          | 0        | 0        | 4.48       |     |
| 451X6A | T 882         |            | 0          | 0          | 0        | 0        | 4.08       |     |
| 451X6B | T 882         |            | 0          | 0          | 0        | 0        | 4.08       |     |
| 451X6  | T 882         |            | 0          | 0          | 0        | 0        | 4.08       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
 F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
 LINE REPLACEABLE UNITS (LRU)  
 S 628 ALIGN HEAD UP DISPLAY (HUD) UNITS  
 S 629 ALIGN INDICATOR RECORDERS  
 S 639 ALIGN OPTICAL DISPLAY SIGHTS  
 S 645 ALIGN TF INDICATORS  
 S 647 ALIGN VIRTUAL IMAGE DISPLAYS (VID)  
 S 808 REMOVE OR REPLACE INDICATOR RECORDER COMPONENTS  
 S 809 REMOVE OR REPLACE INDICATOR RECORDER SRUs  
 S 839 REMOVE OR REPLACE TF INDICATOR COMPONENTS  
 S 840 REMOVE OR REPLACE TF INDICATOR SRUs  
 S 849 REMOVE OR REPLACE VIDs  
 T 851 ALIGN MULTISENSOR DISPLAYS (MSD)  
 T 852 ALIGN VIDEO SIGNALS DISPLAYS (VSD)  
 T 869 REMOVE OR REPLACE HSDI COMPONENTS  
 T 870 REMOVE OR REPLACE HSDI SRUs  
 T 873 REMOVE OR REPLACE HUD UNIT COMPONENTS  
 T 874 REMOVE OR REPLACE HUD UNIT SRUs  
 T 877 REMOVE OR REPLACE MSD COMPONENTS  
 T 878 REMOVE OR REPLACE MSD SRUs  
 T 879 REMOVE OR REPLACE RDC COMPONENTS  
 T 880 REMOVE OR REPLACE RDC SRUs  
 T 881 REMOVE OR REPLACE VSD COMPONENTS  
 T 882 REMOVE OR REPLACE VSD SRUs

**TASK NUMBER: 60440**

**TASK STATEMENT:**

PERFORM OPERATIONAL TESTS ON MISCELLANEOUS TYPE LRUs

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

TEST STATION  
CTK

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR; FUNCTIONAL CHECK; NEW  
ISSUE FROM SUPPLY

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CALL UP TAPE  
A EXECUTE TEST

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S CONNECT LRU TO TEST STATION  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 243         |            | 61         | 62         | 65       | 39       | 4.32       |     |
| 451X6B | F 243         |            | 50         | 60         | 59       | 39       | 4.32       |     |
| 451X6  | F 243         |            | 55         | 60         | 62       | 39       | 4.32       |     |
| 451X6A | S 711         |            | 5          | 12         | 14       | 5        | 4.35       |     |
| 451X6B | S 711         |            | 0          | 0          | 1        | 5        | 4.35       |     |
| 451X6  | S 711         |            | 3          | 6          | 8        | 5        | 4.35       |     |
| 451X6A | S 715         |            | 8          | 9          | 12       | 6        | 4.25       |     |
| 451X6B | S 715         |            | 0          | 0          | 2        | 6        | 4.25       |     |
| 451X6  | S 715         |            | 5          | 5          | 7        | 6        | 4.25       |     |
| 451X6A | S 716         |            | 3          | 3          | 9        | 2        | 4.10       |     |
| 451X6B | S 716         |            | 0          | 0          | 1        | 2        | 4.10       |     |
| 451X6  | S 716         |            | 2          | 2          | 5        | 2        | 4.10       |     |
| 451X6A | S 718         |            | 5          | 10         | 15       | 3        | 4.78       |     |
| 451X6B | S 718         |            | 0          | 0          | 0        | 3        | 4.78       |     |
| 451X6  | S 718         |            | 3          | 5          | 8        | 3        | 4.78       |     |
| 451X6A | S 719         |            | 11         | 9          | 11       | 2        | 3.99       |     |
| 451X6B | S 719         |            | 0          | 0          | 2        | 2        | 3.99       |     |
| 451X6  | S 719         |            | 6          | 5          | 7        | 2        | 3.99       |     |
| 451X6A | S 723         |            | 16         | 13         | 15       | 3        | 3.95       |     |
| 451X6B | S 723         |            | 0          | 0          | 2        | 3        | 3.95       |     |
| 451X6  | S 723         |            | 9          | 7          | 9        | 3        | 3.95       |     |
| 451X6A | S 724         |            | 8          | 9          | 12       | 2        | 3.61       |     |
| 451X6B | S 724         |            | 0          | 0          | 0        | 2        | 3.61       |     |
| 451X6  | S 724         |            | 5          | 5          | 6        | 2        | 3.61       |     |
| 451X6A | S 725         |            | 13         | 12         | 16       | 5        | 3.87       |     |
| 451X6B | S 725         |            | 0          | 0          | 2        | 5        | 3.87       |     |
| 451X6  | S 725         |            | 8          | 6          | 9        | 5        | 3.87       |     |
| 451X6A | S 726         |            | 11         | 10         | 12       | 4        | 3.55       |     |
| 451X6B | S 726         |            | 0          | 0          | 1        | 4        | 3.55       |     |
| 451X6  | S 726         |            | 6          | 5          | 7        | 4        | 3.55       |     |
| 451X6A | S 729         |            | 8          | 7          | 7        | 1        | 3.61       |     |
| 451X6B | S 729         |            | 0          | 0          | 0        | 1        | 3.61       |     |
| 451X6  | S 729         |            | 5          | 3          | 4        | 1        | 3.61       |     |
| 451X6A | S 730         |            | 18         | 17         | 15       | 5        | 4.40       |     |
| 451X6B | S 730         |            | 0          | 0          | 1        | 5        | 4.40       |     |
| 451X6  | S 730         |            | 11         | 8          | 8        | 5        | 4.40       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | S 731         |            | 3          | 2          | 6        | 2        | 3.98       |     |
| 451X6B | S 731         |            | 0          | 0          | 0        | 2        | 3.98       |     |
| 451X6  | S 731         |            | 2          | 1          | 3        | 2        | 3.98       |     |
| 451X6A | S 738         |            | 5          | 7          | 6        | 2        | 4.26       |     |
| 451X6B | S 738         |            | 0          | 0          | 0        | 2        | 4.26       |     |
| 451X6  | S 738         |            | 3          | 3          | 3        | 2        | 4.26       |     |
| 451X6A | S 743         |            | 8          | 8          | 5        | 1        | 3.53       |     |
| 451X6B | S 743         |            | 0          | 0          | 0        | 1        | 3.53       |     |
| 451X6  | S 743         |            | 5          | 4          | 3        | 1        | 3.53       |     |
| 451X6A | S 745         |            | 5          | 10         | 12       | 5        | 3.89       |     |
| 451X6B | S 745         |            | 0          | 0          | 1        | 5        | 3.89       |     |
| 451X6  | S 745         |            | 3          | 5          | 7        | 5        | 3.89       |     |
| 451X6A | S 746         |            | 11         | 11         | 10       | 3        | 4.05       |     |
| 451X6B | S 746         |            | 0          | 0          | 0        | 3        | 4.05       |     |
| 451X6  | S 746         |            | 6          | 6          | 5        | 3        | 4.05       |     |
| 451X6A | S 749         |            | 3          | 9          | 5        | 1        | 4.01       |     |
| 451X6B | S 749         |            | 0          | 0          | 0        | 1        | 4.01       |     |
| 451X6  | S 749         |            | 2          | 5          | 3        | 1        | 4.01       |     |
| 451X6A | S 750         |            | 18         | 17         | 15       | 2        | 3.46       |     |
| 451X6B | S 750         |            | 0          | 0          | 0        | 2        | 3.46       |     |
| 451X6  | S 750         |            | 11         | 8          | 8        | 2        | 3.46       |     |
| 451X6A | S 752         |            | 0          | 0          | 2        | 0        | 4.05       |     |
| 451X6B | S 752         |            | 0          | 0          | 0        | 0        | 4.05       |     |
| 451X6  | S 752         |            | 0          | 0          | 1        | 0        | 4.05       |     |
| 451X6A | S 758         |            | 5          | 8          | 8        | 2        | 4.32       |     |
| 451X6B | S 758         |            | 0          | 0          | 0        | 2        | 4.32       |     |
| 451X6  | S 758         |            | 3          | 4          | 4        | 2        | 4.32       |     |
| 451X6A | S 766         |            | 13         | 16         | 18       | 4        | 4.85       |     |
| 451X6B | S 766         |            | 0          | 0          | 2        | 4        | 4.85       |     |
| 451X6  | S 766         |            | 8          | 8          | 10       | 4        | 4.85       |     |
| 451X6A | S 769         |            | 11         | 17         | 16       | 6        | 4.10       |     |
| 451X6B | S 769         |            | 0          | 0          | 2        | 6        | 4.10       |     |
| 451X6  | S 769         |            | 6          | 8          | 9        | 6        | 4.10       |     |
| 451X6A | U 973         |            | 0          | 0          | 1        | 6        | 4.26       |     |
| 451X6B | U 973         |            | 19         | 20         | 13       | 6        | 4.26       |     |
| 451X6  | U 973         |            | 8          | 10         | 7        | 6        | 4.26       |     |

# **USAF JOB INVENTORY TASK STATEMENTS:**

F 243 PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECTION (T AND I)  
OF LRU<sub>s</sub> ISSUED FROM SUPPLY

S 711 PERFORM OPERATIONAL TESTS OF AFRS ECA<sub>s</sub>

S 715 PERFORM OPERATIONAL TESTS OF AMI ECA<sub>s</sub>

S 716 PERFORM OPERATIONAL TESTS OF AMI<sub>s</sub>

S 718 PERFORM OPERATIONAL TESTS OF ARS ACU<sub>s</sub>

S 719 PERFORM OPERATIONAL TESTS OF ARS AIC<sub>s</sub>

S 723 PERFORM OPERATIONAL TESTS OF ARS RADAR SET CONTROL BOXES

S 724 PERFORM OPERATIONAL TESTS OF ATTITUDE DIRECTOR INDICATORS

S 725 PERFORM OPERATIONAL TESTS OF AVVI ECA<sub>s</sub>

S 726 PERFORM OPERATIONAL TESTS OF AVVI<sub>s</sub>

S 729 PERFORM OPERATIONAL TESTS OF BEARING DISTANCE HEADING  
INDICATORS (BDHI)

S 730 PERFORM OPERATIONAL TESTS OF CMDS CONTROLS

S 731 PERFORM OPERATIONAL TESTS OF COMPUTER CONTROL UNITS

S 738 PERFORM OPERATIONAL TESTS OF F-111D ARS LVPS<sub>s</sub>

S 743 PERFORM OPERATIONAL TESTS OF HORIZONTAL DISPLAY INDICATORS

S 745 PERFORM OPERATIONAL TESTS OF INERTIAL BATTERY UNITS

S 746 PERFORM OPERATIONAL TESTS OF INTERFERENCE BLANKER POWER  
SUPPLIES

S 749 PERFORM OPERATIONAL TESTS OF ISC<sub>s</sub>

S 750 PERFORM OPERATIONAL TESTS OF LAM<sub>s</sub>

S 752 PERFORM OPERATIONAL TESTS OF LCOS<sub>s</sub> AMPLIFIERS

S 758 PERFORM OPERATIONAL TESTS OF NAVIGATION DATA DISPLAY PANELS

S 766 PERFORM OPERATIONAL TESTS OF TFR AMPLIFIER POWER SUPPLIES

S 769 PERFORM OPERATIONAL TESTS OF TFR RADAR SET CONTROLS (RSC)

U 973 PERFORM OPERATIONAL TESTS OF ARN-118 TACAN HORIZONTAL  
SITUATION INDICATORS

**TASK NUMBER: 60450**

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN MISCELLANEOUS TYPE LRU's

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

TEST STATION  
CTK

**REFERENCES:**

APPLICABLE SHOP SYSTEMS TO  
APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S INSTALL EXTENDER BOARDS  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY LRU THEORY OF OPERATION  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K DETERMINE WHETHER MALFUNCTION IS IN TEST STATION, LRU, OR  
ADAPTER (TASK NUMBER: 61360)  
K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION  
PROCEDURES (F 278)  
K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
K VERIFY SUSPECTED FAULTY SRU's

# RELATED OCCUPATIONAL SURVEY DATA:

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | S 651         |            | 13         | 12         | 14       | 5        | 4.80       |     |
| 451X6B | S 651         |            | 0          | 0          | 2        | 5        | 4.80       |     |
| 451X6  | S 651         |            | 8          | 6          | 8        | 5        | 4.80       |     |
| 451X6A | S 654         |            | 16         | 13         | 12       | 5        | 4.79       |     |
| 451X6B | S 654         |            | 0          | 0          | 2        | 5        | 4.79       |     |
| 451X6  | S 654         |            | 9          | 7          | 7        | 5        | 4.79       |     |
| 451X6A | S 656         |            | 8          | 8          | 13       | 3        | 5.07       |     |
| 451X6B | S 656         |            | 0          | 0          | 2        | 3        | 5.07       |     |
| 451X6  | S 656         |            | 5          | 4          | 8        | 3        | 5.07       |     |
| 451X6A | S 657         |            | 11         | 12         | 15       | 5        | 5.61       |     |
| 451X6B | S 657         |            | 0          | 0          | 1        | 5        | 5.61       |     |
| 451X6  | S 657         |            | 6          | 6          | 8        | 5        | 5.61       |     |
| 451X6A | S 661         |            | 16         | 17         | 16       | 4        | 4.58       |     |
| 451X6B | S 661         |            | 0          | 0          | 1        | 4        | 4.58       |     |
| 451X6  | S 661         |            | 9          | 8          | 9        | 4        | 4.58       |     |
| 451X6A | S 663         |            | 26         | 26         | 21       | 7        | 4.34       |     |
| 451X6B | S 663         |            | 0          | 0          | 2        | 7        | 4.34       |     |
| 451X6  | S 663         |            | 15         | 13         | 12       | 7        | 4.34       |     |
| 451X6A | S 664         |            | 3          | 10         | 14       | 5        | 5.38       |     |
| 451X6B | S 664         |            | 0          | 0          | 0        | 5        | 5.38       |     |
| 451X6  | S 664         |            | 2          | 5          | 8        | 5        | 5.38       |     |
| 451X6A | S 667         |            | 3          | 6          | 9        | 2        | 5.05       |     |
| 451X6B | S 667         |            | 0          | 0          | 0        | 2        | 5.05       |     |
| 451X6  | S 667         |            | 2          | 3          | 5        | 2        | 5.05       |     |
| 451X6A | S 668         |            | 21         | 17         | 16       | 7        | 5.53       |     |
| 451X6B | S 668         |            | 0          | 0          | 0        | 7        | 5.53       |     |
| 451X6  | S 668         |            | 12         | 8          | 9        | 7        | 5.53       |     |
| 451X6A | S 675         |            | 5          | 4          | 5        | 3        | 4.84       |     |
| 451X6B | S 675         |            | 0          | 0          | 0        | 3        | 4.84       |     |
| 451X6  | S 675         |            | 3          | 2          | 3        | 3        | 4.84       |     |
| 451X6A | S 683         |            | 3          | 7          | 11       | 5        | 5.93       |     |
| 451X6B | S 683         |            | 0          | 0          | 0        | 5        | 5.93       |     |
| 451X6  | S 683         |            | 2          | 3          | 6        | 5        | 5.93       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | S 684         |            | 8          | 9          | 9        | 3        | 5.65       |     |
| 451X6B | S 684         |            | 0          | 0          | 0        | 3        | 5.65       |     |
| 451X6  | S 684         |            | 5          | 5          | 5        | 3        | 5.65       |     |
| 451X6A | S 689         |            | 0          | 0          | 2        | 0        | 4.67       |     |
| 451X6B | S 689         |            | 0          | 0          | 0        | 0        | 4.67       |     |
| 451X6  | S 689         |            | 0          | 0          | 1        | 0        | 4.67       |     |
| 451X6A | S 690         |            | 21         | 17         | 16       | 3        | 4.28       |     |
| 451X6B | S 690         |            | 0          | 0          | 0        | 3        | 4.28       |     |
| 451X6  | S 690         |            | 12         | 8          | 8        | 3        | 4.28       |     |
| 451X6A | S 704         |            | 13         | 14         | 17       | 5        | 5.28       |     |
| 451X6B | S 704         |            | 0          | 0          | 2        | 5        | 5.28       |     |
| 451X6  | S 704         |            | 8          | 7          | 10       | 5        | 5.28       |     |
| 451X6A | S 707         |            | 5          | 16         | 17       | 5        | 4.99       |     |
| 451X6B | S 707         |            | 0          | 0          | 2        | 5        | 4.99       |     |
| 451X6  | S 707         |            | 3          | 8          | 10       | 5        | 4.99       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES

S 651 ISOLATE MALFUNCTIONS IN AIRSPEED MACH INDICATOR (AMI)  
ELECTRONIC CONTROL AMPLIFIERS (ECA)

S 654 ISOLATE MALFUNCTIONS IN ALTITUDE VERTICAL VELOCITY  
INDICATOR (AVVI) ECAs

S 656 ISOLATE MALFUNCTIONS IN ARS AICs

S 657 ISOLATE MALFUNCTIONS IN ARS ANTENNA CONTROL UNITS (ACU)

S 661 ISOLATE MALFUNCTIONS IN ARS RADAR SET CONTROL BOXES

S 663 ISOLATE MALFUNCTIONS IN AUTOPILOT DAMPER PANELS (APDP)

S 664 ISOLATE MALFUNCTIONS IN AUXILIARY FLIGHT REFERENCE SYSTEM  
(AFRS) ECAs

S 667 ISOLATE MALFUNCTIONS IN COMPUTER CONTROL UNITS

S 668 ISOLATE MALFUNCTIONS IN COUNTERMEASURES DISPENSING SYSTEM  
(CMDS) CONTROLS

S 675 ISOLATE MALFUNCTIONS IN F-111D ARS LVPSs

S 683 ISOLATE MALFUNCTIONS IN INERTIAL BATTERY UNITS TO SRU OR  
COMPONENT LEVEL

S 684 ISOLATE MALFUNCTIONS IN INTERFERENCE BLANKER POWER SUPPLIES  
TO COMPONENT LEVEL

S 689 ISOLATE MALFUNCTIONS IN LCOSs AMPLIFIERS

S 690 ISOLATE MALFUNCTIONS IN LOW ALTITUDE MONITORS (LAM)

S 704 ISOLATE MALFUNCTIONS IN TFR AMPLIFIER POWER SUPPLIES

S 707 ISOLATE MALFUNCTIONS IN TFR RADAR SET CONTROLS

**TASK NUMBER: 60460**

**TASK STATEMENT:**

REPAIR MISCELLANEOUS TYPE LRUs

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES  
CTK  
TEST STATION

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
APPLICABLE IPB

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN SRUs  
A CLEAN CONTACTS (F 210)  
A ORDER PARTS  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)  
A REPAIR WIRING (TASK NUMBER: 61440)  
A RESEAT SRUs

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S INSTALL EXTENDER BOARDS  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | S 612         |            | 13         | 14         | 15       | 3        | 4.95       |     |
| 451X6B | S 612         |            | 0          | 0          | 2        | 3        | 4.95       |     |
| 451X6  | S 612         |            | 8          | 7          | 9        | 3        | 4.95       |     |
| 451X6A | S 615         |            | 8          | 8          | 14       | 3        | 4.36       |     |
| 451X6B | S 615         |            | 0          | 0          | 1        | 3        | 4.36       |     |
| 451X6  | S 615         |            | 5          | 4          | 8        | 3        | 4.36       |     |
| 451X6A | S 623         |            | 5          | 6          | 5        | 2        | 4.63       |     |
| 451X6B | S 623         |            | 0          | 0          | 0        | 2        | 4.63       |     |
| 451X6  | S 623         |            | 3          | 3          | 3        | 2        | 4.63       |     |
| 451X6A | S 631         |            | 5          | 6          | 9        | 3        | 4.78       |     |
| 451X6B | S 631         |            | 0          | 0          | 0        | 3        | 4.78       |     |
| 451X6  | S 631         |            | 3          | 3          | 5        | 3        | 4.78       |     |
| 451X6A | S 633         |            | 3          | 3          | 5        | 0        | 5.06       |     |
| 451X6B | S 633         |            | 0          | 0          | 0        | 0        | 5.06       |     |
| 451X6  | S 633         |            | 2          | 2          | 3        | 0        | 5.06       |     |
| 451X6A | S 772         |            | 0          | 7          | 11       | 4        | 3.90       |     |
| 451X6B | S 772         |            | 0          | 0          | 0        | 4        | 3.90       |     |
| 451X6  | S 772         |            | 0          | 3          | 6        | 4        | 3.90       |     |
| 451X6A | S 776         |            | 5          | 7          | 10       | 4        | 3.40       |     |
| 451X6B | S 776         |            | 0          | 0          | 2        | 4        | 3.40       |     |
| 451X6  | S 776         |            | 3          | 3          | 6        | 4        | 3.40       |     |
| 451X6A | S 779         |            | 3          | 7          | 10       | 1        | 3.63       |     |
| 451X6B | S 779         |            | 0          | 0          | 1        | 1        | 3.63       |     |
| 451X6  | S 779         |            | 2          | 3          | 6        | 1        | 3.63       |     |
| 451X6A | S 780         |            | 5          | 7          | 11       | 1        | 4.21       |     |
| 451X6B | S 780         |            | 0          | 0          | 2        | 1        | 4.21       |     |
| 451X6  | S 780         |            | 3          | 3          | 6        | 1        | 4.21       |     |
| 451X6A | S 784         |            | 5          | 8          | 12       | 2        | 4.17       |     |
| 451X6B | S 784         |            | 0          | 0          | 1        | 2        | 4.17       |     |
| 451X6  | S 784         |            | 3          | 4          | 7        | 2        | 4.17       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | S 785         |            | 13         | 14         | 12       | 3        | 3.87       |     |
| 451X6B | S 785         |            | 0          | 0          | 1        | 3        | 3.87       |     |
| 451X6  | S 785         |            | 8          | 7          | 7        | 3        | 3.87       |     |
| 451X6A | S 786         |            | 8          | 11         | 13       | 5        | 3.26       |     |
| 451X6B | S 786         |            | 0          | 0          | 1        | 5        | 3.26       |     |
| 451X6  | S 786         |            | 5          | 6          | 7        | 5        | 3.26       |     |
| 451X6A | S 790         |            | 16         | 16         | 13       | 5        | 4.82       |     |
| 451X6B | S 790         |            | 0          | 0          | 0        | 5        | 4.82       |     |
| 451X6  | S 790         |            | 9          | 8          | 7        | 5        | 4.82       |     |
| 451X6A | S 791         |            | 11         | 13         | 13       | 5        | 4.68       |     |
| 451X6B | S 791         |            | 0          | 0          | 0        | 5        | 4.68       |     |
| 451X6  | S 791         |            | 6          | 7          | 7        | 5        | 4.68       |     |
| 451X6A | S 792         |            | 0          | 3          | 7        | 1        | 4.47       |     |
| 451X6B | S 792         |            | 0          | 0          | 0        | 1        | 4.47       |     |
| 451X6  | S 792         |            | 0          | 2          | 4        | 1        | 4.47       |     |
| 451X6A | S 793         |            | 3          | 3          | 7        | 2        | 3.88       |     |
| 451X6B | S 793         |            | 0          | 0          | 0        | 2        | 3.88       |     |
| 451X6  | S 793         |            | 2          | 2          | 4        | 2        | 3.88       |     |
| 451X6A | S 803         |            | 3          | 1          | 4        | 2        | 3.63       |     |
| 451X6B | S 803         |            | 0          | 0          | 0        | 2        | 3.63       |     |
| 451X6  | S 803         |            | 2          | 1          | 2        | 2        | 3.63       |     |
| 451X6A | S 810         |            | 0          | 7          | 10       | 5        | 4.27       |     |
| 451X6B | S 810         |            | 0          | 0          | 1        | 5        | 4.27       |     |
| 451X6  | S 810         |            | 0          | 3          | 5        | 5        | 4.27       |     |
| 451X6A | S 811         |            | 3          | 8          | 10       | 5        | 3.85       |     |
| 451X6B | S 811         |            | 0          | 0          | 0        | 5        | 3.85       |     |
| 451X6  | S 811         |            | 2          | 4          | 5        | 5        | 3.85       |     |
| 451X6A | S 813         |            | 11         | 10         | 10       | 3        | 4.43       |     |
| 451X6B | S 813         |            | 0          | 0          | 1        | 3        | 4.43       |     |
| 451X6  | S 813         |            | 6          | 5          | 6        | 3        | 4.43       |     |
| 451X6A | S 817         |            | 13         | 12         | 12       | 2        | 3.26       |     |
| 451X6B | S 817         |            | 0          | 0          | 0        | 2        | 3.26       |     |
| 451X6  | S 817         |            | 8          | 6          | 6        | 2        | 3.26       |     |
| 451X6A | S 819         |            | 0          | 0          | 2        | 0        | 3.88       |     |
| 451X6B | S 819         |            | 0          | 0          | 0        | 0        | 3.88       |     |
| 451X6  | S 819         |            | 0          | 0          | 1        | 0        | 3.88       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | S 841         |            | 5          | 9          | 12       | 3        | 4.22       |     |
| 451X6B | S 841         |            | 0          | 0          | 2        | 3        | 4.22       |     |
| 451X6  | S 841         |            | 3          | 5          | 7        | 3        | 4.22       |     |
| 451X6A | S 842         |            | 5          | 13         | 16       | 4        | 3.66       |     |
| 451X6B | S 842         |            | 0          | 0          | 2        | 4        | 3.66       |     |
| 451X6  | S 842         |            | 3          | 7          | 9        | 4        | 3.66       |     |
| 451X6A | S 846         |            | 3          | 13         | 14       | 6        | 4.69       |     |
| 451X6B | S 846         |            | 0          | 0          | 2        | 6        | 4.69       |     |
| 451X6  | S 846         |            | 2          | 7          | 8        | 6        | 4.69       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
 F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
 LINE REPLACEABLE UNITS (LRU)  
 S 612 ALIGN ATTACK RADAR SYSTEM (ARS) ANTENNA INDICATOR CONTROLS  
 S 615 ALIGN ARS SET CONTROL BOXES  
 S 623 ALIGN F-111D ARS LOW VOLTAGE POWER SUPPLIES (LVPS)  
 S 631 ALIGN INSTRUMENT SET COUPLERS (ISC)  
 S 633 ALIGN LEAD COMPUTING OPTICAL SIGHTS (LCOSs)  
 S 772 REMOVE OR REPLACE AFRS ECA SRUs  
 S 776 REMOVE OR REPLACE AMI ECA SRUs  
 S 779 REMOVE OR REPLACE ARS ACU SRUs  
 S 780 REMOVE OR REPLACE ARS AIC COMPONENTS  
 S 784 REMOVE OR REPLACE ARS RADAR RSC COMPONENTS  
 S 785 REMOVE OR REPLACE AUTOPILOT DAMPER PANELS  
 S 786 REMOVE OR REPLACE AVVI ECA SRUs  
 S 790 REMOVE OR REPLACE CMDS CONTROL COMPONENTS  
 S 791 REMOVE OR REPLACE CMDS CONTROL SRUs  
 S 792 REMOVE OR REPLACE COMPUTER CONTROL UNIT COMPONENTS  
 S 793 REMOVE OR REPLACE COMPUTER CONTROL UNIT SRUs  
 S 803 REMOVE OR REPLACE F-111D ARS LOW VOLTAGE POWER SUPPLY SRUs  
 S 810 REMOVE OR REPLACE INERTIAL BATTERY UNIT COMPONENTS  
 S 811 REMOVE OR REPLACE INERTIAL BATTERY UNIT SRUs  
 S 813 REMOVE OR REPLACE INTERFERENCE BLANKER POWER SUPPLY  
 COMPONENTS  
 S 817 REMOVE OR REPLACE LAM SRUs  
 S 819 REMOVE OR REPLACE LCOSs AMPLIFIERS  
 S 841 REMOVE OR REPLACE TFR AMPLIFIER POWER SUPPLY SRU COMPONENTS  
 S 842 REMOVE OR REPLACE TFR AMPLIFIER POWER SUPPLY SRUs  
 S 846 REMOVE OR REPLACE TFR SET CONTROL COMPONENTS

**'B' SHRED TASKS**

**TASK NUMBER: 60470**

**TASK STATEMENT:**

PERFORM CONFIDENCE TESTS OF THE CADC (1803A1) TEST STATION  
(V1085)

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

ESD PROTECTIVE EQUIPMENT  
85D-12A1803A1-T001-001

**REFERENCES:**

33D3-24-18-2

33D3-24-18-8-1

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

SUSPECTED MALFUNCTION; EVERY 180 DAYS; AFTER REPAIR; AFTER  
PHYSICAL MOVE

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A LOAD TAPE INTO READER

A EXECUTE TEST

**SKILLS:**

S ADJUST SYNCHROS USING API

S CONNECT SELF-TEST HARNESS CABLES

S OPERATE TEST STATION

S USE DIGITAL MULTIMETER TO MEASURE AC AND DC VOLTAGES AND  
POSITIVE AND NEGATIVE RATIOS

**KNOWLEDGE:**

K ANNOTATE FORMS

K APPLY ESD PRECAUTIONS

K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS

K APPLY SHOP SAFETY PROCEDURES

**KNOWLEDGE:**

K APPLY TECHNICAL DATA  
K INTERPRET API  
K INTERPRET PSVM

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | V1085         |            | 0          | 0          | 0        | 4        | 4.57       |     |
| 451X6B | V1085         |            | 8          | 12         | 10       | 4        | 4.57       |     |
| 451X6  | V1085         |            | 3          | 6          | 5        | 4        | 4.57       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

V1085 PERFORM CONFIDENCE TESTS OF CADC (1803A1) TEST STATIONS

**TASK NUMBER: 60480**

**TASK STATEMENT:**

PERFORM MAINTENANCE TESTS OF THE CADC (1803A1) TEST STATION  
(V1088)

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS  
RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

ESD PROTECTIVE EQUIPMENT  
85D-12A1803A1-T001-00A

**REFERENCES:**

33D3-24-18-2  
33D3-24-18-8-1

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

SUSPECTED MALFUNCTION; PI EVERY 180 DAYS; AFTER REPAIR; AFTER  
PHYSICAL MOVE

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A LOAD TAPE INTO READER  
A EXECUTE TEST  
A PERFORM CONFIDENCE TEST OF THE CADC (1803A1) TEST STATION  
(TASK NUMBER: 60470)

**SKILLS:**

S ADJUST SYNCHROS USING API  
S CONNECT SELF TEST HARNESS AND CABLES  
S OPERATE TEST STATION  
S USE DIGITAL MULTIMETER TO MEASURE AC AND DC VOLTAGES AND  
POSITIVE AND NEGATIVE RATIOS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY ESD PRECAUTIONS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS

**KNOWLEDGE:**

K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K INTERPRET API  
K INTERPRET PSVM

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 244         |            | 47         | 66         | 72       | 38       | 5.10       |     |
| 451X6B | F 244         |            | 42         | 48         | 54       | 38       | 5.10       |     |
| 451X6  | F 244         |            | 45         | 56         | 64       | 38       | 5.10       |     |
| 451X6A | V1088         |            | 0          | 0          | 0        | 3        | 5.35       |     |
| 451X6B | V1088         |            | 8          | 11         | 9        | 3        | 5.35       |     |
| 451X6  | V1088         |            | 3          | 5          | 4        | 3        | 5.35       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 244 PERFORM MAINTENANCE TAPE TESTS OF TEST STATIONS  
V1088 PERFORM MAINTENANCE TESTS OF CADC (1803A1) TEST STATIONS

**TASK NUMBER: 60490**

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN THE CADC (1803A1) TEST STATION (V1071)

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS  
RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
DIGITAL MULTIMETER  
ESD PROTECTIVE EQUIPMENT  
EXTENDER BOARDS  
OSCILLOSCOPE  
SYNCHRO STANDARD

**REFERENCES:**

33D3-24-18-1  
33D3-24-18-2  
APPROPRIATE TRU TO

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CHECK DIGITAL INPUTS  
A PERFORM CONFIDENCE TEST OF THE CADC (1803A1) TEST STATION  
(TASK NUMBER: 60470)  
A PERFORM MAINTENANCE TEST OF THE CADC (1803A1) TEST STATION  
(TASK NUMBER: 60480)

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S INSTALL EXTENDER BOARDS  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S USE DIGITAL MULTIMETER TO CHECK TRANSISTORS, DIODES AND  
RESISTORS CHARACTERISTICS AND CHECK CONTINUITY

## SKILLS:

- S USE OSCILLOSCOPE TO MEASURE AC AND DC VOLTAGES AND PULSE
- S USE SYNCHRO STANDARD TO ALIGN SYNCHROS

## KNOWLEDGE:

- K ANNOTATE FORMS
- K APPLY AC CIRCUIT THEORY OF OPERATION
- K APPLY BASIC DIGITAL PRINCIPLES
- K APPLY CAPACITOR THEORY OF OPERATION
- K APPLY DC CIRCUIT THEORY OF OPERATION
- K APPLY ESD PRECAUTIONS
- K APPLY GENERAL DIGITAL PRINCIPLES
- K APPLY INDUCTOR THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT ZENER DIODE THEORY OF OPERATION
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY PHOTOSENSITIVE DEVICE THEORY OF OPERATION
- K APPLY POWER SUPPLY THEORY OF OPERATION
- K APPLY RELAY THEORY OF OPERATION
- K APPLY RESISTOR THEORY OF OPERATION
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY SOLID STATE DIODE THEORY OF OPERATION
- K APPLY SYNCHRO-SERVO THEORY OF OPERATION
- K APPLY TECHNICAL DATA
- K APPLY THREE-PHASE TRANSFORMER THEORY OF OPERATION
- K APPLY TRANSFORMER THEORY OF OPERATION
- K APPLY TRANSISTOR AMPLIFIER STABILIZATION CIRCUIT THEORY OF OPERATION
- K APPLY TRANSISTOR AMPLIFIER CIRCUIT THEORY OF OPERATION
- K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING
- K DETERMINE WHETHER MALFUNCTION IS IN TEST STATION, LRU, OR ADAPTER (TASK NUMBER: 61360)
- K DETERMINE WHICH PUSH-BUTTON SWITCHES REQUIRE AN ADAPTER CAP
- K IDENTIFY PROPER CONTROL PANEL SWITCH CALLED OUT IN SCHEMATICS
- K INTERPRET RESISTOR COLOR CODES
- K ISOLATE FAULTY CAPACITORS
- K ISOLATE FAULTY DISPLAY TUBES
- K ISOLATE FAULTY INDUCTORS
- K ISOLATE FAULTY LIMITER CIRCUIT DIODES
- K ISOLATE FAULTY LIMITER CIRCUIT ZENER DIODES
- K ISOLATE FAULTY LIMITER TRANSISTOR CIRCUITS
- K ISOLATE FAULTY PHOTOSENSITIVE DEVICES
- K ISOLATE FAULTY POWER SUPPLIES
- K ISOLATE FAULTY RELAYS
- K ISOLATE FAULTY RESISTORS
- K ISOLATE FAULTY SOLID STATE DIODES
- K ISOLATE FAULTY SYNCHROS-SERVOS
- K ISOLATE FAULTY THREE-PHASE TRANSFORMERS
- K ISOLATE FAULTY TRANSFORMERS
- K ISOLATE FAULTY TRANSISTOR AMPLIFIER STABILIZATION CIRCUITS
- K ISOLATE FAULTY TRANSISTOR AMPLIFIER CIRCUITS

**KNOWLEDGE:**

K ISOLATE MALFUNCTIONS IN TEST STATION THROUGH INTERCONNECTS OF  
AN INSTALLED LRU (TASK NUMBER: 61370)  
K PERFORM BINARY CONVERSIONS  
K PERFORM BINARY MATH OPERATIONS  
K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION  
PROCEDURES (F 278)  
K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
K TROUBLESHOOT INDUCTORS  
K TROUBLESHOOT LIMITER CIRCUIT DIODES  
K TROUBLESHOOT LIMITER CIRCUIT TRANSISTORS  
K TROUBLESHOOT LIMITER CIRCUIT ZENER DIODES  
K TROUBLESHOOT PHOTOSENSITIVE DEVICES  
K TROUBLESHOOT POWER SUPPLY CIRCUITS  
K TROUBLESHOOT RELAYS  
K TROUBLESHOOT SYNCHROS-SERVOS  
K TROUBLESHOOT THREE-PHASE TRANSFORMERS  
K TROUBLESHOOT TRANSFORMERS  
K TROUBLESHOOT TRANSISTOR AMPLIFIER STABILIZATION CIRCUITS  
K TROUBLESHOOT TRANSISTOR AMPLIFIER CIRCUITS  
K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | V1071         |            | 0          | 0          | 0        | 4        | 6.65       |     |
| 451X6B | V1071         |            | 4          | 12         | 10       | 4        | 6.65       |     |
| 451X6  | V1071         |            | 2          | 6          | 5        | 4        | 6.65       |     |
| 451X6A | V1075         |            | 0          | 0          | 0        | 3        | 6.35       |     |
| 451X6B | V1075         |            | 0          | 4          | 6        | 3        | 6.35       |     |
| 451X6  | V1075         |            | 0          | 2          | 3        | 3        | 6.35       |     |
| 451X6A | V1077         |            | 0          | 0          | 0        | 3        | 6.56       |     |
| 451X6B | V1077         |            | 4          | 7          | 7        | 3        | 6.56       |     |
| 451X6  | V1077         |            | 2          | 3          | 3        | 3        | 6.56       |     |
| 451X6A | V1078         |            | 0          | 0          | 0        | 2        | 6.38       |     |
| 451X6B | V1078         |            | 4          | 6          | 8        | 2        | 6.38       |     |
| 451X6  | V1078         |            | 2          | 3          | 4        | 2        | 6.38       |     |
| 451X6A | V1080         |            | 0          | 0          | 0        | 3        | 6.27       |     |
| 451X6B | V1080         |            | 4          | 7          | 8        | 3        | 6.27       |     |
| 451X6  | V1080         |            | 2          | 3          | 4        | 3        | 6.27       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | V1082         |            | 0          | 0          | 0        | 3        | 6.40       |     |
| 451X6B | V1082         |            | 4          | 5          | 6        | 3        | 6.40       |     |
| 451X6  | V1082         |            | 2          | 2          | 3        | 3        | 6.40       |     |
| 451X6A | V1083         |            | 0          | 0          | 0        | 3        | 6.35       |     |
| 451X6B | V1083         |            | 4          | 7          | 7        | 3        | 6.35       |     |
| 451X6  | V1083         |            | 2          | 3          | 4        | 3        | 6.35       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
V1071 ISOLATE MALFUNCTIONS IN CADC (1803A1) TEST STATIONS  
V1075 ISOLATE MALFUNCTIONS IN TEST STATION ANGLE POSITION  
INDICATORS TO SRU OR COMPONENT LEVEL  
V1077 ISOLATE MALFUNCTIONS IN TEST STATION AUTOMATIC CONTROL  
PANELS TO COMPONENT LEVEL  
V1078 ISOLATE MALFUNCTIONS IN TEST STATION DIGITAL COMPARATORS TO  
SRU OR COMPONENT LEVEL  
V1080 ISOLATE MALFUNCTIONS IN TEST STATION MANUAL CONTROL PANELS  
TO COMPONENT LEVEL  
V1082 ISOLATE MALFUNCTIONS IN TEST STATION SIGNAL SIMULATE AND  
MEASURE PANELS TO SRU OR COMPONENT LEVEL  
V1083 ISOLATE MALFUNCTIONS IN TEST STATION TAPE BLOCK READERS TO  
SRU OR COMPONENT LEVEL

**TASK NUMBER: 60500**

**TASK STATEMENT:**

REPAIR THE CADC (1803A1) TEST STATION

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES

CTK

ESD PROTECTIVE EQUIPMENT

EXTENDER BOARDS

OSCILLOSCOPE

**REFERENCES:**

33D-24-18-2

33D-24-18-4

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN CADC (1803A1) TEST STATIONS (V1042)

A CLEAN CONTACTS (F 210)

A ORDER PARTS

A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)

A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)

A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)

A REMOVE AND REPLACE TRUs (TASK NUMBER: 61380)

A REPAIR WIRING (TASK NUMBER: 61440)

A RESEAT SRUs

**SKILLS:**

S INSTALL EXTENDER BOARDS

S OPERATE TEST STATION

S USE COMMON HANDTOOLS

S USE OSCILLOSCOPE TO ALIGN SYNCHROS AND TAPE READER

**KNOWLEDGE:**

K ANNOTATE FORMS

K APPLY ESD PRECAUTIONS

**KNOWLEDGE:**

K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | V1042         |            | 0          | 0          | 0        | 4        | 6.27       |     |
| 451X6B | V1042         |            | 4          | 9          | 10       | 4        | 6.27       |     |
| 451X6  | V1042         |            | 2          | 5          | 5        | 4        | 6.27       |     |
| 451X6A | V1047         |            | 0          | 0          | 0        | 2        | 5.76       |     |
| 451X6B | V1047         |            | 0          | 4          | 6        | 2        | 5.76       |     |
| 451X6  | V1047         |            | 0          | 2          | 3        | 2        | 5.76       |     |
| 451X6A | V1051         |            | 0          | 0          | 0        | 2        | 5.54       |     |
| 451X6B | V1051         |            | 4          | 4          | 6        | 2        | 5.54       |     |
| 451X6  | V1051         |            | 2          | 2          | 3        | 2        | 5.54       |     |
| 451X6A | V1052         |            | 0          | 0          | 0        | 3        | 5.84       |     |
| 451X6B | V1052         |            | 4          | 5          | 6        | 3        | 5.84       |     |
| 451X6  | V1052         |            | 2          | 2          | 3        | 3        | 5.84       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
V1042 ALIGN CENTRAL AIR DATA COMPUTER (CADC) (1803A1) TEST STATIONS  
V1047 ALIGN TEST STATION ANGLE POSITION INDICATORS  
V1051 ALIGN TEST STATION SIGNAL SIMULATE AND MEASURE PANELS  
V1052 ALIGN TEST STATION TAPE BLOCK READERS

**TASK NUMBER: 60510**

**TASK STATEMENT:**

PERFORM PERIODIC INSPECTIONS ON THE CADC (1803A1) TEST STATION

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING RAGS  
CLEANING SOLVENTS AND BRUSHES  
CTK  
Q-TIPS  
85D-12A1803A1-T001-001  
85D-12A1803A1-T001-00A

**REFERENCES:**

33D3-24-18-2  
33D3-24-18-8-1  
00-25-234

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CALIBRATE CADC (1803A1) TEST STATION (V1053)  
A CLEAN CONTACTS (F 210)  
A CLEAN TEST STATION BLOWERS AND FILTERS (F 219)  
A LOAD TAPE INTO READER  
A ORDER PARTS  
A PERFORM CONFIDENCE TEST OF THE CADC (1803A1) TEST STATION  
(TASK NUMBER: 60470)  
A PERFORM MAINTENANCE TEST OF THE CADC (1803A1) TEST STATION  
(TASK NUMBER: 60480)

**SKILLS:**

S CONNECT SELF-TEST HARNESS AND CABLES  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K DETERMINE WHICH TRU OR SRU REQUIRES CALIBRATION

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 219         |            | 89         | 88         | 82       | 45       | 2.78       |     |
| 451X6B | F 219         |            | 85         | 85         | 78       | 45       | 2.78       |     |
| 451X6  | F 219         |            | 86         | 85         | 80       | 45       | 2.78       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | V1053         |            | 0          | 0          | 0        | 4        | 6.25       |     |
| 451X6B | V1053         |            | 0          | 6          | 9        | 4        | 6.25       |     |
| 451X6  | V1053         |            | 0          | 3          | 5        | 4        | 6.25       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
F 219 INSPECT AND CLEAN TEST STATION BLOWERS AND FILTERS  
F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
LINE REPLACEABLE UNITS (LRU)  
V1053 CALIBRATE CAD/C (1803A1) TEST STATIONS

**TASK NUMBER: 60520**

**TASK STATEMENT:**

PERFORM OPERATIONAL TESTS ON LRUs THAT RUN ON THE CADC (1803A1)  
TEST STATION

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS  
RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
ESD PROTECTIVE EQUIPMENT  
TEST STATION  
TTU-205

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR; FUNCTIONAL CHECK; NEW  
ISSUE FROM SUPPLY

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A LOAD TAPE INTO READER  
A EXECUTE TEST

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S CONNECT LRU TO TEST STATION  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S USE TTU-205 TO PRESSURIZE LRUs

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY ESD PRECAUTIONS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS

**KNOWLEDGE:**

K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 243         |            | 61         | 62         | 65       | 39       | 4.32       |     |
| 451X6B | F 243         |            | 50         | 60         | 59       | 39       | 4.32       |     |
| 451X6  | F 243         |            | 55         | 60         | 62       | 39       | 4.32       |     |
| 451X6A | V1112         |            | 0          | 0          | 1        | 3        | 5.12       |     |
| 451X6B | V1112         |            | 8          | 15         | 10       | 3        | 5.12       |     |
| 451X6  | V1112         |            | 3          | 7          | 5        | 3        | 5.12       |     |
| 451X6A | V1113         |            | 0          | 0          | 0        | 3        | 4.41       |     |
| 451X6B | V1113         |            | 8          | 15         | 10       | 3        | 4.41       |     |
| 451X6  | V1113         |            | 3          | 7          | 5        | 3        | 4.41       |     |
| 451X6A | V1114         |            | 0          | 0          | 0        | 3        | 4.90       |     |
| 451X6B | V1114         |            | 4          | 8          | 9        | 3        | 4.90       |     |
| 451X6  | V1114         |            | 2          | 4          | 4        | 3        | 4.90       |     |
| 451X6A | V1115         |            | 0          | 0          | 0        | 2        | 5.05       |     |
| 451X6B | V1115         |            | 4          | 2          | 3        | 2        | 5.05       |     |
| 451X6  | V1115         |            | 2          | 1          | 2        | 2        | 5.05       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 243 PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECTION (T AND I)  
OF LRUs ISSUED FROM SUPPLY  
V1112 PERFORM OPERATIONAL TESTS OF CADCS  
V1113 PERFORM OPERATIONAL TESTS OF MSMA's  
V1114 PERFORM OPERATIONAL TESTS OF SUBSYSTEM TIE-IN TEST SETS  
V1115 PERFORM OPERATIONAL TESTS OF TFR TEST SETS

**TASK NUMBER: 60530**

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN LRU# THAT RUN ON THE CADC (1803A1) TEST STATION

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
ESD PROTECTIVE EQUIPMENT  
MULTIMETER  
OSCILLOSCOPE  
SOLDERING STATION  
TEST STATION

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
APPLICABLE IPB

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S INSTALL EXTENDER BOARDS  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S SOLDER OR DESOLDER TERMINAL CONNECTIONS  
S USE COMMON HANDTOOLS  
S USE MULTIMETER TO CHECK VOLTAGES  
S USE OSCILLOSCOPE TO CHECK SIGNALS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY AC CIRCUIT THEORY OF OPERATION  
K APPLY APPROXIMATION A/D CONVERTER THEORY OF OPERATION

## KNOWLEDGE:

K APPLY BIPOLAR JUNCTION TRANSISTOR THEORY OF OPERATION  
K APPLY CAPACITOR THEORY OF OPERATION  
K APPLY CRT THEORY OF OPERATION  
K APPLY CLAMPER CIRCUIT THEORY OF OPERATION  
K APPLY DC CIRCUIT THEORY OF OPERATION  
K APPLY DISPLAY TUBE THEORY OF OPERATION  
K APPLY ESD PRECAUTIONS  
K APPLY FREQUENCY SENSITIVE FILTER THEORY OF OPERATION  
K APPLY INDUCTOR THEORY OF OPERATION  
K APPLY INTEGRATED CIRCUIT THEORY OF OPERATION  
K APPLY LCD THEORY OF OPERATION  
K APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATION  
K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION  
K APPLY LIMITER CIRCUIT ZENER DIODE THEORY OF OPERATION  
K APPLY LOGIC CIRCUIT COUNTER THEORY OF OPERATION  
K APPLY LOGIC CIRCUIT REGISTER THEORY OF OPERATION  
K APPLY LRU THEORY OF OPERATION  
K APPLY METER MOVEMENT THEORY OF OPERATION  
K APPLY OPERATIONAL AMPLIFIER THEORY OF OPERATION  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY PHOTSENSITIVE DEVICE THEORY OF OPERATION  
K APPLY POWER SUPPLY FILTER THEORY OF OPERATION  
K APPLY POWER SUPPLY RECTIFIER THEORY OF OPERATION  
K APPLY RAMP A/D CONVERTER THEORY OF OPERATION  
K APPLY RCL CIRCUIT THEORY OF BASIC OPERATION  
K APPLY RCL CIRCUIT THEORY OF RESONANT OPERATION  
K APPLY RELAY THEORY OF OPERATION  
K APPLY RESISTOR THEORY OF OPERATION  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY SOLENOID THEORY OF OPERATION  
K APPLY SOLID STATE DIODE THEORY OF OPERATION  
K APPLY SYNCHRO-SERVO THEORY OF OPERATION  
K APPLY TECHNICAL DATA  
K APPLY THREE-PHASE TRANSFORMER THEORY OF OPERATION  
K APPLY TRANSDUCER THEORY OF OPERATION  
K APPLY TRANSFORMER THEORY OF OPERATION  
K APPLY TRANSISTOR AMPLIFIER STABILIZATION CIRCUIT THEORY OF OPERATION  
K APPLY TRANSISTOR AMPLIFIER CIRCUIT THEORY OF OPERATION  
K APPLY VOLTAGE REGULATOR THEORY OF OPERATION  
K APPLY WEIGHTED RESISTOR D/A CONVERTER THEORY OF OPERATION  
K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING  
K DETERMINE WHETHER MALFUNCTION IS IN TEST STATION, LRU, OR  
ADAPTER (TASK NUMBER: 61360)  
K ISOLATE FAULTY AC CIRCUITS  
K ISOLATE FAULTY APPROXIMATION A/D CONVERTERS  
K ISOLATE FAULTY BIPOLAR JUNCTION TRANSISTORS  
K ISOLATE FAULTY CRTs  
K ISOLATE FAULTY CLAMPER CIRCUITS  
K ISOLATE FAULTY DC CIRCUITS  
K ISOLATE FAULTY DISPLAY TUBES  
K ISOLATE FAULTY FREQUENCY SENSITIVE FILTERS  
K ISOLATE FAULTY INDUCTORS  
K ISOLATE FAULTY INTEGRATED CIRCUITS

**KNOWLEDGE:**

K ISOLATE FAULTY LCDs  
 K ISOLATE FAULTY LIMITER CIRCUIT DIODES  
 K ISOLATE FAULTY LIMITER CIRCUIT ZENER DIODES  
 K ISOLATE FAULTY LIMITER TRANSISTOR CIRCUITS  
 K ISOLATE FAULTY LOGIC COUNTERS  
 K ISOLATE FAULTY METER MOVEMENTS  
 K ISOLATE FAULTY OPERATIONAL AMPLIFIERS  
 K ISOLATE FAULTY PHOTOSENSITIVE DEVICES  
 K ISOLATE FAULTY POWER SUPPLY FILTERS  
 K ISOLATE FAULTY POWER SUPPLY RECTIFIERS  
 K ISOLATE FAULTY RAMP A/D CONVERTERS  
 K ISOLATE FAULTY RCL CIRCUITS  
 K ISOLATE FAULTY REGISTER LOGIC CIRCUITS  
 K ISOLATE FAULTY RELAYS  
 K ISOLATE FAULTY RESISTORS  
 K ISOLATE FAULTY SOLENOIDS  
 K ISOLATE FAULTY SOLID STATE DIODES  
 K ISOLATE FAULTY SYNCHROS-SERVOS  
 K ISOLATE FAULTY THREE-PHASE TRANSFORMERS  
 K ISOLATE FAULTY TRANSDUCERS  
 K ISOLATE FAULTY TRANSFORMERS  
 K ISOLATE FAULTY TRANSISTOR AMPLIFIER STABILIZATION CIRCUITS  
 K ISOLATE FAULTY TRANSISTOR AMPLIFIER CIRCUITS  
 K ISOLATE FAULTY VOLTAGE REGULATORS  
 K ISOLATE FAULTY WEIGHTED RESISTOR D/A CONVERTERS  
 K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)  
 K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
 K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
 K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | V1072         |            | 0          | 0          | 1        | 3        | 6.16       |     |
| 451X6B | V1072         |            | 8          | 14         | 10       | 3        | 6.16       |     |
| 451X6  | V1072         |            | 3          | 7          | 5        | 3        | 6.16       |     |
| 451X6A | V1073         |            | 0          | 0          | 0        | 3        | 5.59       |     |
| 451X6B | V1073         |            | 8          | 15         | 10       | 3        | 5.59       |     |
| 451X6  | V1073         |            | 3          | 7          | 5        | 3        | 5.59       |     |
| 451X6A | V1074         |            | 0          | 0          | 0        | 3        | 6.03       |     |
| 451X6B | V1074         |            | 4          | 9          | 9        | 3        | 6.03       |     |
| 451X6  | V1074         |            | 2          | 5          | 5        | 3        | 6.03       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | V1084         |            | 0          | 3          | 2        | 2        | 6.71       |     |
| 451X6B | V1084         |            | 4          | 4          | 3        | 2        | 6.71       |     |
| 451X6  | V1084         |            | 2          | 3          | 2        | 2        | 6.71       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
V1072 ISOLATE MALFUNCTIONS IN CADCS TO SRU OR COMPONENT LEVEL  
V1073 ISOLATE MALFUNCTIONS IN MSMA TO SRU OR COMPONENT LEVEL  
V1074 ISOLATE MALFUNCTIONS IN SUBSYSTEM TIE-IN TEST SETS TO SRU  
OR COMPONENT LEVEL  
V1084 ISOLATE MALFUNCTIONS IN TFR TEST SETS TO SRU OR COMPONENT  
LEVEL

**TASK NUMBER: 60540**

**TASK STATEMENT:**

REPAIR LRUs THAT RUN ON THE CADc (1803A1) TEST STATION

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES

CTK

ESD PROTECTIVE EQUIPMENT

MULTIMETER

OSCILLOSCOPE

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

APPLICABLE IPB

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN SRUs

A CLEAN CONTACTS (F 210)

A ORDER PARTS

A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)

A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)

A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)

A REPAIR WIRING (TASK NUMBER: 61440)

A RESEAT SRUs

**SKILLS:**

S OPERATE TEST STATION

S PERFORM SAFETY WIRING (TASK NUMBER: 61450)

S PERFORM VISUAL INSPECTIONS

S USE COMMON HANDTOOLS

S USE MULTIMETER TO CHECK VOLTAGES AND CONTINUITY

S USE OSCILLOSCOPE

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY ESD PRECAUTIONS  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | V1043         |            | 0          | 0          | 0        | 3        | 6.05       |     |
| 451X6B | V1043         |            | 4          | 12         | 9        | 3        | 6.05       |     |
| 451X6  | V1043         |            | 2          | 6          | 4        | 3        | 6.05       |     |
| 451X6A | V1044         |            | 0          | 0          | 0        | 3        | 4.86       |     |
| 451X6B | V1044         |            | 8          | 14         | 10       | 3        | 4.86       |     |
| 451X6  | V1044         |            | 3          | 7          | 5        | 3        | 4.86       |     |
| 451X6A | V1045         |            | 0          | 0          | 0        | 3        | 5.42       |     |
| 451X6B | V1045         |            | 4          | 9          | 8        | 3        | 5.42       |     |
| 451X6  | V1045         |            | 2          | 5          | 4        | 3        | 5.42       |     |
| 451X6A | V1046         |            | 0          | 1          | 1        | 2        | 5.82       |     |
| 451X6B | V1046         |            | 4          | 4          | 3        | 2        | 5.82       |     |
| 451X6  | V1046         |            | 2          | 2          | 2        | 2        | 5.82       |     |
| 451X6A | V1140         |            | 0          | 0          | 0        | 3        | 3.55       |     |
| 451X6B | V1140         |            | 8          | 13         | 9        | 3        | 3.55       |     |
| 451X6  | V1140         |            | 3          | 6          | 4        | 3        | 3.55       |     |
| 451X6A | V1141         |            | 0          | 0          | 0        | 3        | 4.39       |     |
| 451X6B | V1141         |            | 4          | 9          | 8        | 3        | 4.39       |     |
| 451X6  | V1141         |            | 2          | 5          | 4        | 3        | 4.39       |     |
| 451X6A | V1153         |            | 0          | 0          | 0        | 2        | 4.38       |     |
| 451X6B | V1153         |            | 8          | 6          | 3        | 2        | 4.38       |     |
| 451X6  | V1153         |            | 3          | 3          | 2        | 2        | 4.38       |     |
| 451X6A | V1154         |            | 0          | 0          | 0        | 3        | 3.19       |     |
| 451X6B | V1154         |            | 8          | 12         | 10       | 3        | 3.19       |     |
| 451X6  | V1154         |            | 3          | 6          | 5        | 3        | 3.19       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
LINE REPLACEABLE UNITS (LRU)  
V1043 ALIGN CENTRAL AIR DATA COMPUTERS (CADC)  
V1044 ALIGN MAXIMUM SAFE MACH ASSEMBLIES (MSMA)  
V1045 ALIGN SUBSYSTEM TIE-IN TEST SETS  
V1046 ALIGN TERRAIN FOLLOWING RADAR (TFR) TEST SETS  
V1140 REMOVE OR REPLACE MSMA SRUs OR COMPONENTS  
V1141 REMOVE OR REPLACE SUBSYSTEM TIE-IN TEST SET SRUs OR  
COMPONENTS  
V1153 REMOVE OR REPLACE TFR TEST SET SRUs OR COMPONENTS  
V1154 SAFETY WIRE CADC SRUs

**TASK NUMBER:** 60550

**TASK STATEMENT:** -

TRANSFER DATA FROM FDR 30-TRACK TAPE MAGAZINE TO 7-TRACK  
TAPE (U1029)

**TASK NOTES:**

PERFORMED AT MT HOME AFB AND RAF UPPER HEYFORD

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
ESD PROTECTIVE EQUIPMENT  
SIGNAL DATA CONVERTER

**REFERENCES:**

CHECKLIST ON INSIDE PANEL OF SDC

**CUES:**

RECEIPT OF FLIGHT DATA MAGAZINE

**STANDARDS:**

IAW INSTRUCTION CHECKLIST

**ACTIVITIES:**

A MOUNT 30 TRACK TAPE MAGAZINE  
A MOUNT 7 TRACK TAPE  
A TRANSFER DATA  
A ERASE TAPE

**SKILLS:**

S CONNECT CABLES  
S OPERATE SDC  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY ESD PRECAUTIONS  
K APPLY INFORMATION ON CHECKLIST  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | U1029         |            | 0          | 0          | 0        | 3        | 3.36       |     |
| 451X6B | U1029         |            | 12         | 16         | 11       | 3        | 3.36       |     |
| 451X6  | U1029         |            | 5          | 8          | 5        | 3        | 3.36       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

U1029 TRANSFER DATA FROM FLIGHT DATA RECORDER 30-TRACK TAPE  
MAGAZINES TO 7-TRACK TAPES

**TASK NUMBER: 60560**

**TASK STATEMENT:**

PERFORM OPERATIONAL TESTS OF LRUs THAT COMPRISE THE APX-64 IFF SYSTEM

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS  
RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

APM-137 TEST SET  
APM-239A TEST SET  
APM-245 TEST SET  
CTK  
FAULT ISOLATION TEST METER  
MULTIMETER  
OSCILLOSCOPE

**REFERENCES:**

12P4-2APX64-2  
12P-APX-142

**CONDITIONS:**

2 PERSON REQUIREMENT; DRY ENVIRONMENT; KNOWN GOOD SHOP STANDARDS

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR; FUNCTIONAL CHECK

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A EXECUTE TEST  
A MEASURE TRANSMISSION POWER

**SKILLS:**

S CONNECT LRU TO TEST SETS  
S PERFORM VISUAL INSPECTIONS  
S USE APM-137 TEST SET  
S USE APM-239A TEST SET  
S USE APM-245 TEST SET  
S USE COMMON HANDTOOLS  
S USE FAULT ISOLATION TEST METER TO MEASURE VOLTAGES FROM POWER SUPPLY AND LRU SIGNALS

**SKILLS:**

- S USE MULTIMETER.
- S USE OSCILLOSCOPE TO CHECK BANDWIDTH, FREQUENCY, AND SIDELOBES

**KNOWLEDGE:**

- K ANNOTATE FORMS
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 243         |            | 61         | 62         | 65       | 39       | 4.32       |     |
| 451X6B | F 243         |            | 50         | 60         | 59       | 39       | 4.32       |     |
| 451X6  | F 243         |            | 55         | 60         | 62       | 39       | 4.32       |     |
| 451X6A | U 952         |            | 0          | 0          | 1        | 8        | 4.46       |     |
| 451X6B | U 952         |            | 31         | 35         | 27       | 8        | 4.46       |     |
| 451X6  | U 952         |            | 12         | 17         | 13       | 8        | 4.46       |     |
| 451X6A | U 953         |            | 0          | 0          | 1        | 10       | 5.05       |     |
| 451X6B | U 953         |            | 35         | 36         | 29       | 10       | 5.05       |     |
| 451X6  | U 953         |            | 14         | 18         | 14       | 10       | 5.05       |     |
| 451X6A | U 954         |            | 0          | 0          | 1        | 8        | 4.73       |     |
| 451X6B | U 954         |            | 23         | 31         | 21       | 8        | 4.73       |     |
| 451X6  | U 954         |            | 9          | 15         | 11       | 8        | 4.73       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

- F 243 PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECTION (T AND I) OF LRU<sub>s</sub> ISSUED FROM SUPPLY
- U 952 PERFORM OPERATIONAL TESTS OF APX-64 IFF SYSTEM RADIO SET CONTROLS
- U 953 PERFORM OPERATIONAL TESTS OF APX-64 IFF SYSTEM RECEIVER-TRANSMITTERS
- U 954 PERFORM OPERATIONAL TESTS OF APX-64 IFF TRANSPONDER TEST SETS

**TASK NUMBER:** 60570

**TASK STATEMENT:** .

ISOLATE MALFUNCTIONS IN LRUs THAT COMPRISE THE APX-64 IFF SYSTEM

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

APM-137 TEST SET  
APM-239A TEST SET  
APM-245 TEST SET  
CAPACITOR TESTER  
CARD EXTENDERS  
CTK  
DIGITAL LOGIC PROBE  
FAULT ISOLATION TEST METER  
MODULE EXTENDERS  
MULTIMETER  
OSCILLOSCOPE  
SIGNAL GENERATOR  
SOLDERING STATION  
TUBE TESTER

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**SKILLS:**

S PERFORM VISUAL INSPECTIONS  
S SOLDER OR DESOLDER PC BOARDS  
S SOLDER OR DESOLDER TERMINAL CONNECTIONS  
S USE APM-137 TEST SET  
S USE APM-239A TEST SET  
S USE APM-245 TEST SET  
S USE CAPACITOR TESTER  
S USE CARD EXTENDERS TO FACILITATE TROUBLESHOOTING  
S USE COMMON HANDTOOLS  
S USE DIGITAL LOGIC PROBE  
S USE FAULT ISOLATION TEST METER  
S USE MULTIMETER TO CHECK VOLTAGES AND CONTINUITY

## SKILLS:

- S USE OSCILLOSCOPE TO CHECK VOLTAGES AND MEASURE PULSE CHARACTERISTICS
- S USE SIGNAL GENERATOR
- S USE TUBE TESTER

## KNOWLEDGE:

- K ANNOTATE FORMS
- K APPLY AC CIRCUIT THEORY OF OPERATION
- K APPLY BIPOLAR JUNCTION TRANSISTOR THEORY OF OPERATION
- K APPLY CAPACITOR THEORY OF OPERATION
- K APPLY DC CIRCUIT THEORY OF OPERATION
- K APPLY ELECTRON TUBE AMPLIFIER THEORY OF OPERATION
- K APPLY FREQUENCY SENSITIVE FILTER THEORY OF OPERATION
- K APPLY INDUCTOR THEORY OF OPERATION
- K APPLY INTEGRATED CIRCUIT THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT ZENER DIODE THEORY OF OPERATION
- K APPLY LRU THEORY OF OPERATION
- K APPLY MAIN LOGIC GATE THEORY OF OPERATION
- K APPLY MATH PRINCIPLES
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY OSCILLATOR CIRCUIT THEORY OF OPERATION
- K APPLY POWER SUPPLY FILTER THEORY OF OPERATION
- K APPLY POWER SUPPLY RECTIFIER THEORY OF OPERATION
- K APPLY POWER SUPPLY THEORY OF OPERATION
- K APPLY PULSE MODULATION TRANSMITTER THEORY OF OPERATION
- K APPLY RCL CIRCUIT THEORY OF BASIC OPERATION
- K APPLY RCL CIRCUIT THEORY OF RESONANT OPERATION
- K APPLY RELAY THEORY OF OPERATION
- K APPLY RESISTOR THEORY OF OPERATION
- K APPLY RESONANT CAVITY THEORY OF OPERATION
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY SOLID STATE DIODE THEORY OF OPERATION
- K APPLY TECHNICAL DATA
- K APPLY TRANSFORMER THEORY OF OPERATION
- K APPLY TRANSISTOR AMPLIFIER CIRCUIT THEORY OF OPERATION
- K APPLY TRANSMISSION LINE THEORY OF OPERATION
- K APPLY VOLTAGE REGULATOR THEORY OF OPERATION
- K APPLY WAVESHAPING CIRCUIT THEORY OF OPERATION
- K APPLY ZENER DIODE THEORY OF OPERATION
- K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING
- K ISOLATE FAULTY BIPOLAR JUNCTION TRANSISTORS
- K ISOLATE FAULTY CAPACITORS
- K ISOLATE FAULTY ELECTRON TUBE AMPLIFIERS
- K ISOLATE FAULTY FREQUENCY SENSITIVE FILTERS
- K ISOLATE FAULTY INDUCTORS
- K ISOLATE FAULTY INTEGRATED CIRCUITS
- K ISOLATE FAULTY LIMITER CIRCUIT DIODES
- K ISOLATE FAULTY LIMITER CIRCUIT ZENER DIODES
- K ISOLATE FAULTY LIMITER TRANSISTOR CIRCUITS
- K ISOLATE FAULTY MAIN LOGIC GATES

## KNOWLEDGE:

- K ISOLATE FAULTY OSCILLATOR CIRCUITS
- K ISOLATE FAULTY POWER SUPPLIES
- K ISOLATE FAULTY POWER SUPPLY FILTERS
- K ISOLATE FAULTY POWER SUPPLY RECTIFIERS
- K ISOLATE FAULTY PULSE MODULATION TRANSMITTERS
- K ISOLATE FAULTY RCL CIRCUITS
- K ISOLATE FAULTY RELAYS
- K ISOLATE FAULTY RESISTORS
- K ISOLATE FAULTY RESONANT CAVITIES
- K ISOLATE FAULTY SOLID STATE DIODES
- K ISOLATE FAULTY TRANSFORMERS
- K ISOLATE FAULTY TRANSISTOR AMPLIFIER CIRCUITS
- K ISOLATE FAULTY TRANSMISSION LINES
- K ISOLATE FAULTY VOLTAGE REGULATORS
- K ISOLATE FAULTY WAVESHAPING CIRCUITS
- K ISOLATE FAULTY ZENER DIODES
- K PERFORM BASIC AC CIRCUIT CALCULATIONS
- K PERFORM BASIC DC CIRCUIT CALCULATIONS
- K PERFORM OCTAL CONVERSIONS
- K PERFORM RCL CIRCUIT CALCULATIONS
- K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)
- K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)
- K TROUBLESHOOT AC CIRCUITS
- K TROUBLESHOOT BIPOLAR JUNCTION TRANSISTORS
- K TROUBLESHOOT DC CIRCUITS
- K TROUBLESHOOT FREQUENCY SENSITIVE FILTERS
- K TROUBLESHOOT INDUCTORS
- K TROUBLESHOOT LIMITER CIRCUIT DIODES
- K TROUBLESHOOT LIMITER CIRCUIT TRANSISTORS
- K TROUBLESHOOT LIMITER CIRCUIT ZENER DIODES
- K TROUBLESHOOT MAIN LOGIC GATES
- K TROUBLESHOOT POWER SUPPLY CIRCUITS
- K TROUBLESHOOT POWER SUPPLY FILTERS
- K TROUBLESHOOT POWER SUPPLY RECTIFIERS
- K TROUBLESHOOT PULSE MODULATION TRANSMITTER
- K TROUBLESHOOT RCL CIRCUITS
- K TROUBLESHOOT RELAYS
- K TROUBLESHOOT RESONANT CAVITIES
- K TROUBLESHOOT TRANSFORMERS
- K TROUBLESHOOT TRANSISTOR AMPLIFIER CIRCUITS
- K TROUBLESHOOT VOLTAGE REGULATOR
- K TROUBLESHOOT WAVE GENERATING CIRCUIT OSCILLATORS
- K TROUBLESHOOT WAVESHAPING CIRCUITS
- K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)
- K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | U 905         |            | 0          | 0          | 0        | 7        | 5.44       |     |
| 451X6B | U 905         |            | 31         | 33         | 27       | 7        | 5.44       |     |
| 451X6  | U 905         |            | 12         | 16         | 13       | 7        | 5.44       |     |
| 451X6A | U 906         |            | 0          | 0          | 0        | 7        | 6.14       |     |
| 451X6B | U 906         |            | 35         | 34         | 25       | 7        | 6.14       |     |
| 451X6  | U 906         |            | 14         | 16         | 12       | 7        | 6.14       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
U 905 ISOLATE MALFUNCTIONS IN APX-64 IFF RADIO SET CONTROLS TO  
SRU OR COMPONENT LEVEL  
U 906 ISOLATE MALFUNCTIONS IN APX-64 IFF SYSTEM RECEIVER-  
TRANSMITTERS TO SRU OR COMPONENT LEVEL

**TASK NUMBER:** 60580

**TASK STATEMENT:** .

REPAIR LRUs THAT COMPRISE THE APX-64 IFF SYSTEM

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES

CTK

ESD PROTECTIVE EQUIPMENT

SOLDERING STATION

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

APPLICABLE IPB

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN SRUs

A CLEAN CONTACTS (F 210)

A ORDER PARTS

A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)

A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)

A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)

A REPAIR WIRING (TASK NUMBER: 61440)

A RESEAT SRUs

A TUNE OR ADJUST RESONANT CAVITIES

**SKILLS:**

S PERFORM VISUAL INSPECTIONS

S SOLDER OR DESOLDER PC BOARDS

S USE COMMON HANDTOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS

K APPLY ESD PRECAUTIONS

K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS

**KNOWLEDGE:**

K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | U 885         |            | 0          | 0          | 0        | 9        | 6.31       |     |
| 451X6B | U 885         |            | 35         | 35         | 26       | 9        | 6.31       |     |
| 451X6  | U 885         |            | 14         | 17         | 13       | 9        | 6.31       |     |
| 451X6A | U 994         |            | 0          | 0          | 0        | 7        | 4.44       |     |
| 451X6B | U 994         |            | 23         | 26         | 21       | 7        | 4.44       |     |
| 451X6  | U 994         |            | 9          | 12         | 10       | 7        | 4.44       |     |
| 451X6A | U 995         |            | 0          | 0          | 0        | 7        | 4.33       |     |
| 451X6B | U 995         |            | 38         | 32         | 25       | 7        | 4.33       |     |
| 451X6  | U 995         |            | 15         | 15         | 12       | 7        | 4.33       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
LINE REPLACEABLE UNITS (LRU)  
U 885 ALIGN APX-64 IDENTIFICATION FRIEND OR FOE (IFF) SYSTEM  
RECEIVER-TRANSMITTERS  
U 994 REMOVE OR REPLACE APX-64 IFF RADIO SET CONTROL COMPONENTS  
U 995 REMOVE OR REPLACE APX-64 IFF SYSTEM RECEIVER-TRANSMITTER  
SRUs OR COMPONENTS

**TASK NUMBER: 60590**

**TASK STATEMENT:**

MAINTAIN IFF MODE IV COMPUTERS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES  
CTK  
OSCILLOSCOPE  
PULSE GENERATOR  
SIGNAL GENERATOR  
ST-21 TEST SET

**REFERENCES:**

KAM-225 E/TSEC (S)  
SAM-22B/TSEC (S)  
AFKAM-225C (S) (AF SUP)

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CLEAN CONTACTS (F 210)  
A ISOLATE MALFUNCTIONS IN IFF MODE IV COMPUTERS TO SRU (U 931)  
A ORDER PARTS  
A PERFORM OPERATIONAL TESTS OF IFF MODE IV COMPUTERS (U 981)  
A REMOVE AND REPLACE IFF MODE IV COMPUTER SRUs (TASK NUMBER: 61390)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A RESEAT SRUs

**SKILLS:**

S CONNECT LRU TO TEST SETS  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S USE OSCILLOSCOPE TO CHECK VOLTAGES  
S USE PULSE GENERATOR  
S USE SIGNAL GENERATOR TO SUPPLY PULSE  
S USE ST-21 TEST SET

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY OSCILLATOR CIRCUIT THEORY OF OPERATION  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION  
PROCEDURES (F 278)  
K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 243         |            | 61         | 62         | 65       | 39       | 4.32       |     |
| 451X6B | F 243         |            | 50         | 60         | 59       | 39       | 4.32       |     |
| 451X6  | F 243         |            | 55         | 60         | 62       | 39       | 4.32       |     |
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | U 931         |            | 0          | 0          | 0        | 7        | 5.85       |     |
| 451X6B | U 931         |            | 15         | 16         | 16       | 7        | 5.85       |     |
| 451X6  | U 931         |            | 6          | 8          | 8        | 7        | 5.85       |     |
| 451X6A | U 981         |            | 0          | 0          | 0        | 7        | 4.85       |     |
| 451X6B | U 981         |            | 23         | 16         | 17       | 7        | 4.85       |     |
| 451X6  | U 981         |            | 9          | 8          | 8        | 7        | 4.85       |     |
| 451X6A | U1019         |            | 0          | 0          | 0        | 5        | 4.12       |     |
| 451X6B | U1019         |            | 19         | 16         | 14       | 5        | 4.12       |     |
| 451X6  | U1019         |            | 8          | 8          | 7        | 5        | 4.12       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
F 243 PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECTION (T AND I)  
OF LRUs ISSUED FROM SUPPLY  
F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
U 931 ISOLATE MALFUNCTIONS IN IFF MODE IV COMPUTERS TO SRU  
U 981 PERFORM OPERATIONAL TESTS OF IFF MODE IV COMPUTERS  
U1019 REMOVE OR REPLACE IFF MODE IV COMPUTER SRUs

**TASK NUMBER:** 60600

**TASK STATEMENT:** .

MAINTAIN TEST SETS USED WITH THE APX-64 IFF SYSTEM

**TASK NOTES:**

THIS TASK COVERS APM-239A ONLY. OTHER TEST SETS (APM-245, UPM-137, AND UPM-137A) ARE MAINTAINED BY PMEL.

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
DIGITAL MULTIMETER  
ESD PROTECTIVE EQUIPMENT  
IFF R/T  
LOGIC CURVE TRACER  
OSCILLOSCOPE  
SOLDERING STATION

**REFERENCES:**

12P4-2APX64-2  
33A1-3-358-11  
33A1-3-358-11S-3

**CONDITIONS:**

KNOWN GOOD SHOP STANDARD

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ORDER PARTS  
A PERFORM IFF R/T FUNCTIONAL TEST  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REPAIR WIRING (TASK NUMBER: 61440)

**SKILLS:**

S CONNECT LRU TO TEST SETS  
S OPERATE IFF R/T

**SKILLS:**

S PERFORM VISUAL INSPECTIONS  
 S SOLDER OR DESOLDER PC BOARDS  
 S USE COMMON HANDTOOLS  
 S USE DIGITAL MULTIMETER TO CHECK CONTINUITY AND VOLTAGE  
 S USE LOGIC CURVE TRACER TO IDENTIFY SOLID STATE CHARACTERISTICS  
 S USE OSCILLOSCOPE TO CHECK VOLTAGE

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY AC CIRCUIT THEORY OF OPERATION  
 K APPLY AC GENERATOR THEORY OF OPERATION  
 K APPLY BIPOLAR JUNCTION TRANSISTOR THEORY OF OPERATION  
 K APPLY DC CIRCUIT THEORY OF OPERATION  
 K APPLY ESD PRECAUTIONS  
 K APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATION  
 K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION  
 K APPLY LIMITER CIRCUIT ZENER DIODE THEORY OF OPERATION  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY RESISTOR THEORY OF OPERATION  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY SOLID STATE DIODE THEORY OF OPERATION  
 K APPLY TECHNICAL DATA  
 K APPLY TRANSISTOR AMPLIFIER CIRCUIT THEORY OF OPERATION  
 K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING  
 K PERFORM BASIC AC CIRCUIT CALCULATIONS  
 K PERFORM BASIC DC CIRCUIT CALCULATIONS  
 K PERFORM RCL CIRCUIT CALCULATIONS  
 K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)  
 K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
 K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | U 944         |            | 0          | 0          | 0        | 4        | 4.92       |     |
| 451X6B | U 944         |            | 23         | 15         | 14       | 4        | 4.92       |     |
| 451X6  | U 944         |            | 9          | 7          | 7        | 4        | 4.92       |     |
| 451X6A | U 945         |            | 0          | 0          | 0        | 4        | 5.01       |     |
| 451X6B | U 945         |            | 19         | 15         | 14       | 4        | 5.01       |     |
| 451X6  | U 945         |            | 8          | 7          | 7        | 4        | 5.01       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | U 946         |            | 0          | 0          | 0        | 3        | 5.24       |     |
| 451X6B | U 946         |            | 8          | 9          | 7        | 3        | 5.24       |     |
| 451X6  | U 946         |            | 3          | 5          | 4        | 3        | 5.24       |     |
| 451X6A | U 947         |            | 0          | 0          | 0        | 3        | 5.23       |     |
| 451X6B | U 947         |            | 19         | 12         | 11       | 3        | 5.23       |     |
| 451X6  | U 947         |            | 8          | 6          | 5        | 3        | 5.23       |     |
| 451X6A | U 980         |            | 0          | 0          | 1        | 8        | 4.83       |     |
| 451X6B | U 980         |            | 31         | 32         | 25       | 8        | 4.83       |     |
| 451X6  | U 980         |            | 12         | 15         | 13       | 8        | 4.83       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
U 944 ISOLATE MALFUNCTIONS TO APM-239A TEST SETS  
U 945 ISOLATE MALFUNCTIONS TO APM-245 TEST SETS  
U 946 ISOLATE MALFUNCTIONS TO UPM-137 TEST SETS  
U 947 ISOLATE MALFUNCTIONS TO UPM-137A TEST SETS  
U 980 PERFORM OPERATIONAL TESTS OF IFF MOCKUP TEST EQUIPMENT

**TASK NUMBER:** 60610

**TASK STATEMENT:**

MAINTAIN MODE IV INTERROGATOR TEST SETS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES  
CTK  
MULTIMETER  
OSCILLOSCOPE

**REFERENCES:**

KAM-225 E/TSEC (S)  
SAM-22B/TSEC (S)  
AFKAM-225C (S) (AF SUP)

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CLEAN CONTACTS (F 210)  
A ISOLATE MALFUNCTIONS IN MODE IV INTERROGATOR TEST SETS TO SRU  
OR COMPONENT LEVEL (U 935)  
A ORDER PARTS  
A PERFORM KIT/KIR FUNCTIONAL TEST  
A REMOVE AND REPLACE IFF MODE IV INTERROGATOR TEST SET SRUs OR  
COMPONENTS (U1020)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REPAIR WIRING (TASK NUMBER: 61440)  
A RESEAT SRUs

**SKILLS:**

S CONNECT LRU TO TEST SETS  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S USE MULTIMETER TO CHECK CONTINUITY AND VOLTAGE  
S USE OSCILLOSCOPE

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY TECHNICAL DATA  
 K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING  
 K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)  
 K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
 K TROUBLESHOOT POWER SUPPLY CIRCUITS  
 K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
 K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | U 935         |            | 0          | 0          | 0        | 5        | 5.59       |     |
| 451X6B | U 935         |            | 15         | 14         | 12       | 5        | 5.59       |     |
| 451X6  | U 935         |            | 6          | 7          | 6        | 5        | 5.59       |     |
| 451X6A | U1020         |            | 0          | 0          | 0        | 5        | 3.99       |     |
| 451X6B | U1020         |            | 19         | 13         | 14       | 5        | 3.99       |     |
| 451X6  | U1020         |            | 8          | 6          | 7        | 5        | 3.99       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
 F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
 U 935 ISOLATE MALFUNCTIONS IN MODE IV INTERROGATOR TEST SETS TO SRU OR COMPONENT LEVEL  
 U1020 REMOVE OR REPLACE IFF MODE IV INTERROGATOR TEST SET SRUs OR COMPONENTS

**TASK NUMBER:** 60620

**TASK STATEMENT:**

PERFORM OPERATIONAL TESTS OF LRU<sub>s</sub> THAT COMPRISE THE ARC-164  
UHF SYSTEM

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

ARC-164 TEST SET  
CTK  
HEAD SET  
MULTIMETER  
OSCILLATOR  
OSCILLOSCOPE  
POWER OUTPUT METER  
SIGNAL GENERATOR  
TACAN R/T (ARM-118)  
TACAN TEST SET (972V-1)  
TEST ADAPTER  
WATT METER (25 WATT)  
28V POWER SUPPLY

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

**CONDITIONS:**

KNOWN GOOD LRU<sub>s</sub> IN SYSTEM

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR; FUNCTIONAL CHECK

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A EXECUTE TEST

**SKILLS:**

S CONNECT LRU TO TEST SETS  
S PERFORM VISUAL INSPECTIONS  
S USE 28V POWER SUPPLY TO POWER TEST SET  
S USE ARC-164 TEST SET TO INTERCONNECT SYSTEM  
S USE COMMON HANDTOOLS  
S USE HEAD SET TO HEAR AUDIO

**SKILLS:**

S USE MULTIMETER TO MEASURE RESISTANCE  
 S USE OSCILLATOR TO PROVIDE 2 MHz REFERENCE  
 S USE OSCILLOSCOPE TO MEASURE MODULATION AND FREQUENCY  
 S USE POWER OUTPUT METER TO MEASURE DB AND MILLI-WATTS  
 S USE SIGNAL GENERATOR TO SIMULATE SIGNALS AND MEASURE FREQUENCY  
 S USE TACAN R/T TO TEST TACAN PORTION OF UHF BLADE ANTENNA  
 S USE TACAN TEST SET TO POWER TACAN R/T  
 S USE TEST ADAPTER TO KEY HEAD SET  
 S USE WATT METER TO VERIFY REFLECTED POWER

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY TECHNICAL DATA  
 K DETERMINE THE SIZE OF WATT CRYSTAL NEEDED  
 K READ DBM INDICATIONS

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 243         |            | 61         | 62         | 65       | 39       | 4.32       |     |
| 451X6B | F 243         |            | 50         | 60         | 59       | 39       | 4.32       |     |
| 451X6  | F 243         |            | 55         | 60         | 62       | 39       | 4.32       |     |
| 451X6A | U 960         |            | 0          | 0          | 1        | 9        | 4.04       |     |
| 451X6B | U 960         |            | 38         | 42         | 34       | 9        | 4.04       |     |
| 451X6  | U 960         |            | 15         | 20         | 17       | 9        | 4.04       |     |
| 451X6A | U 961         |            | 0          | 0          | 1        | 9        | 4.37       |     |
| 451X6B | U 961         |            | 38         | 42         | 34       | 9        | 4.37       |     |
| 451X6  | U 961         |            | 15         | 20         | 17       | 9        | 4.37       |     |
| 451X6A | U 962         |            | 0          | 0          | 1        | 10       | 4.69       |     |
| 451X6B | U 962         |            | 46         | 48         | 37       | 10       | 4.69       |     |
| 451X6  | U 962         |            | 18         | 23         | 18       | 10       | 4.69       |     |
| 451X6A | U 989         |            | 0          | 0          | 0        | 4        | 3.50       |     |
| 451X6B | U 989         |            | 8          | 14         | 13       | 4        | 3.50       |     |
| 451X6  | U 989         |            | 3          | 7          | 6        | 4        | 3.50       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

- F 243 PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECTION (T AND I)  
OF LRUs ISSUED FROM SUPPLY
- U 960 PERFORM OPERATIONAL TESTS OF ARC-164 UHF FREQUENCY  
INDICATORS
- U 961 PERFORM OPERATIONAL TESTS OF ARC-164 UHF RADIO SET CONTROLS
- U 962 PERFORM OPERATIONAL TESTS OF ARC-164 UHF RECEIVER-  
TRANSMITTERS
- U 989 PERFORM OPERATIONAL TESTS OF UHF BLADE ANTENNAS

**TASK NUMBER: 60630**

**TASK STATEMENT: .**

ISOLATE MALFUNCTIONS IN LRUs THAT COMPRISE THE ARC-164 UHF  
SYSTEM

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CAPACITOR TESTER  
CTK  
DIGITAL LOGIC PROBE  
ESD PROTECTIVE EQUIPMENT  
FREQUENCY COUNTER  
MULTIMETER  
OSCILLOSCOPE  
POWER OUTPUT METER  
SIGNAL GENERATOR  
THRULINE WATTMETER

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

**CONDITIONS:**

KNOWN GOOD SHOP STANDARD

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**SKILLS:**

S PERFORM VISUAL INSPECTIONS  
S USE CAPACITOR TESTER TO TEST POWER CAPACITOR SUPPLY FILTERS  
S USE COMMON HANDTOOLS  
S USE DIGITAL LOGIC PROBE TO ISOLATE MALFUNCTION IN MODULES  
S USE FREQUENCY COUNTER TO CHECK FREQUENCY  
S USE MULTIMETER TO CHECK TRANSISTOR PROBE VOLTAGE AND ISOLATE  
POWER SUPPLY  
S USE OSCILLOSCOPE TO CHECK WAVE SHAPES AND VOLTAGE LEVELS  
S USE POWER OUTPUT METER TO CHECK POWER READINGS  
S USE SIGNAL GENERATOR TO SUPPLY GENERATED SIGNAL INTO MODULE TO  
PRODUCE SIGNAL  
S USE THRULINE WATTMETER

## KNOWLEDGE

- K ANNOTATE FORMS
- K APPLY AC CIRCUIT THEORY OF OPERATION
- K APPLY AM MODULATION TRANSMITTER THEORY OF OPERATION
- K APPLY AM RECEIVER THEORY OF OPERATION
- K APPLY ANTENNA THEORY OF OPERATION
- K APPLY BIPOLAR JUNCTION TRANSISTOR THEORY OF OPERATION
- K APPLY CAPACITOR THEORY OF OPERATION
- K APPLY CLAMPER CIRCUIT THEORY OF OPERATION
- K APPLY DC CIRCUIT THEORY OF OPERATION
- K APPLY ESD PRECAUTIONS
- K APPLY FLIP-FLOP THEORY OF OPERATION
- K APPLY FM RECEIVER THEORY OF OPERATION
- K APPLY FREQUENCY SENSITIVE FILTER THEORY OF OPERATION
- K APPLY INDUCTOR THEORY OF OPERATION
- K APPLY INTEGRATED CIRCUIT THEORY OF OPERATION
- K APPLY LED THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT ZENER DIODE THEORY OF OPERATION
- K APPLY LRU THEORY OF OPERATION
- K APPLY MAIN LOGIC GATE THEORY OF OPERATION
- K APPLY OPERATIONAL AMPLIFIER THEORY OF OPERATION
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY OSCILLATOR CIRCUIT THEORY OF OPERATION
- K APPLY POWER SUPPLY FILTER THEORY OF OPERATION
- K APPLY POWER SUPPLY RECTIFIER THEORY OF OPERATION
- K APPLY POWER SUPPLY THEORY OF OPERATION
- K APPLY PULSE MODULATION TRANSMITTER THEORY OF OPERATION
- K APPLY RCL CIRCUIT THEORY OF RESONANT OPERATION
- K APPLY RELAY THEORY OF OPERATION
- K APPLY RESISTOR THEORY OF OPERATION
- K APPLY SHOP SAFETY PRACTICES
- K APPLY SOLID STATE DIODE THEORY OF OPERATION
- K APPLY TECHNICAL DATA
- K APPLY THREE-PHASE TRANSFORMER THEORY OF OPERATION
- K APPLY TRANSFORMER THEORY OF OPERATION
- K APPLY TRANSISTOR AMPLIFIER COUPLING CIRCUIT THEORY OF OPERATION
- K APPLY TRANSISTOR AMPLIFIER STABILIZATION CIRCUIT THEORY OF OPERATION
- K APPLY TUNNEL DIODE THEORY OF OPERATION
- K APPLY VOLTAGE REGULATOR THEORY OF OPERATION
- K APPLY WAVESHAPING CIRCUIT THEORY OF OPERATION
- K APPLY ZENER DIODE THEORY OF OPERATION
- K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING
- K ISOLATE FAULTY AC CIRCUITS
- K ISOLATE FAULTY AM RECEIVERS
- K ISOLATE FAULTY AM TRANSMITTERS
- K ISOLATE FAULTY BIPOLAR JUNCTION TRANSISTORS
- K ISOLATE FAULTY CAPACITORS
- K ISOLATE FAULTY CLAMPER CIRCUITS
- K ISOLATE FAULTY DC CIRCUITS
- K ISOLATE FAULTY FLIP-FLOPS

**KNOWLEDGE:**

K ISOLATE FAULTY FM RECEIVERS  
K ISOLATE FAULTY FREQUENCY SENSITIVE FILTERS  
K ISOLATE FAULTY INDUCTORS  
K ISOLATE FAULTY INTEGRATED CIRCUITS  
K ISOLATE FAULTY LEDs  
K ISOLATE FAULTY LIMITER CIRCUIT DIODES  
K ISOLATE FAULTY LIMITER CIRCUIT ZENER DIODES  
K ISOLATE FAULTY LIMITER TRANSISTOR CIRCUITS  
K ISOLATE FAULTY MAIN LOGIC GATES  
K ISOLATE FAULTY OPERATIONAL AMPLIFIERS  
K ISOLATE FAULTY OSCILLATOR CIRCUITS  
K ISOLATE FAULTY POWER SUPPLIES  
K ISOLATE FAULTY POWER SUPPLY FILTERS  
K ISOLATE FAULTY POWER SUPPLY RECTIFIERS  
K ISOLATE FAULTY PULSE MODULATION TRANSMITTERS  
K ISOLATE FAULTY RCL CIRCUITS  
K ISOLATE FAULTY RELAYS  
K ISOLATE FAULTY SOLID STATE DIODES  
K ISOLATE FAULTY THREE-PHASE TRANSFORMERS  
K ISOLATE FAULTY TRANSFORMERS  
K ISOLATE FAULTY TRANSISTOR AMPLIFIER STABILIZATION CIRCUITS  
K ISOLATE FAULTY TRANSISTOR AMPLIFIER COUPLING CIRCUITS  
K ISOLATE FAULTY TUNNEL DIODES  
K ISOLATE FAULTY VOLTAGE REGULATORS  
K ISOLATE FAULTY WAVESHAPING CIRCUITS  
K ISOLATE FAULTY ZENER DIODES  
K PERFORM BASIC AC CIRCUIT CALCULATIONS  
K PERFORM BASIC DC CIRCUIT CALCULATIONS  
K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)  
K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | U 912         |            | 0          | 0          | 1        | 8        | 5.24       |     |
| 451X6B | U 912         |            | 31         | 38         | 32       | 8        | 5.24       |     |
| 451X6  | U 912         |            | 12         | 18         | 16       | 8        | 5.24       |     |
| 451X6A | U 913         |            | 0          | 0          | 0        | 8        | 5.12       |     |
| 451X6B | U 913         |            | 38         | 38         | 33       | 8        | 5.12       |     |
| 451X6  | U 913         |            | 15         | 18         | 16       | 8        | 5.12       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

- F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES
- U 912 ISOLATE MALFUNCTIONS IN ARC-164 ULTRA HIGH FREQUENCY (UHF)  
RADIO SET CONTROLS TO SRU OR COMPONENT LEVEL
- U 913 ISOLATE MALFUNCTIONS IN ARC-164 UHF RECEIVER-TRANSMITTERS  
TO SRU

**TASK NUMBER: 60640**

**TASK STATEMENT: .**

REPAIR LRUs THAT COMPRISE THE ARC-164 UHF SYSTEM

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES  
CTK  
ESD PROTECTIVE EQUIPMENT  
SOLDERING STATION

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
APPLICABLE IPB

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CLEAN CONTACTS (F 210)  
A ORDER PARTS  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)  
A REPAIR WIRING (TASK NUMBER: 61440)  
A RESEAT SRUs

**SKILLS:**

S PERFORM VISUAL INSPECTIONS  
S SOLDER OR DESOLDER PC BOARDS  
S USE COMMON HANDTOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY ESD PRECAUTIONS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**KNOWLEDGE:**

K CALCULATE PERCENTAGE OF MODULATION  
K USE METRIC NOTATION

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | U 889         |            | 0          | 0          | 1        | 9        | 5.03       |     |
| 451X6B | U 889         |            | 38         | 45         | 33       | 9        | 5.03       |     |
| 451X6  | U 889         |            | 15         | 21         | 16       | 9        | 5.03       |     |
| 451X6A | U1000         |            | 0          | 0          | 1        | 7        | 4.02       |     |
| 451X6B | U1000         |            | 35         | 35         | 29       | 7        | 4.02       |     |
| 451X6  | U1000         |            | 14         | 17         | 14       | 7        | 4.02       |     |
| 451X6A | U1001         |            | 0          | 0          | 1        | 8        | 3.89       |     |
| 451X6B | U1001         |            | 38         | 39         | 30       | 8        | 3.89       |     |
| 451X6  | U1001         |            | 15         | 19         | 15       | 8        | 3.89       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
LINE REPLACEABLE UNITS (LRU)  
U 889 ALIGN ARC-164 UHF RECEIVER-TRANSMITTERS  
U1000 REMOVE OR REPLACE ARC-164 UHF RADIO SET CONTROL SRUs OR  
COMPONENTS  
U1001 REMOVE OR REPLACE ARC-164 UHF RECEIVER-TRANSMITTERS SRUs

**TASK NUMBER: 60650**

**TASK STATEMENT:**

MAINTAIN TEST SETS USED WITH THE ARC-164 UHF SYSTEM.

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

ARC-164 UHF LRUs  
AUDIO OSCILLATOR  
CLEANING SOLVENTS AND BRUSHES  
CTK  
DIGITAL MULTIMETER  
FREQUENCY COUNTER  
HEADSET  
MX-9533 TEST ADAPTER  
OSCILLOSCOPE  
POWER OUTPUT METER  
POWER SUPPLY  
RF POWER METER  
SIGNAL GENERATOR  
THRULINE WATTMETER  
VARIABLE ATTENUATOR

**REFERENCES:**

33D7-50-159-1  
12R2-2ARC164-32

**CONDITIONS:**

KNOWN GOOD SHOP STANDARD

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CLEAN CONTACTS (F 210)  
A ISOLATE MALFUNCTIONS IN ARC-164 UHF SYSTEM TEST SETS  
A ORDER PARTS  
A PERFORM OPERATIONAL TESTS OF ARC-164 UHF SYSTEM TEST SETS  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)

## ACTIVITIES:

- A REPAIR WIRING (TASK NUMBER: 61440)
- A RESEAT SRUs

## SKILLS:

- S CONNECT LRU TO TEST SETS
- S PERFORM VISUAL INSPECTIONS
- S USE ARC-164 UHF LRUs
- S USE AUDIO OSCILLATOR
- S USE COMMON HANDTOOLS
- S USE DIGITAL MULTIMETER TO CHECK VOLTAGES
- S USE FREQUENCY COUNTER
- S USE HEADSET
- S USE MX-9533 TEST ADAPTER
- S USE OSCILLOSCOPE TO CHECK VOLTAGES
- S USE POWER OUTPUT METER
- S USE POWER SUPPLY
- S USE RF POWER METER
- S USE SIGNAL GENERATOR
- S USE THRULINE WATTMETER
- S USE VARIABLE ATTENUATOR

## KNOWLEDGE:

- K ANNOTATE FORMS
- K APPLY ARC-164 UHF SYSTEM THEORY OF OPERATION
- K APPLY BIPOLAR JUNCTION TRANSISTOR THEORY OF OPERATION
- K APPLY DC CIRCUIT THEORY OF OPERATION
- K APPLY INTEGRATED CIRCUIT THEORY OF OPERATION
- K APPLY LED THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT ZENER DIODE THEORY OF OPERATION
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY SOLID STATE DIODE THEORY OF OPERATION
- K APPLY TECHNICAL DATA
- K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING
- K ISOLATE FAULTY BIPOLAR JUNCTION TRANSISTORS
- K ISOLATE FAULTY INTEGRATED CIRCUITS
- K ISOLATE FAULTY LEDs
- K ISOLATE FAULTY LIMITER CIRCUIT DIODES
- K ISOLATE FAULTY LIMITER CIRCUIT ZENER DIODES
- K ISOLATE FAULTY SOLID STATE DIODES
- K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)
- K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)
- K TROUBLESHOOT BIPOLAR JUNCTION TRANSISTORS
- K TROUBLESHOOT DC CIRCUITS
- K TROUBLESHOOT LIMITER CIRCUIT DIODES
- K TROUBLESHOOT LIMITER CIRCUIT ZENER DIODES
- K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)
- K VERIFY SUSPECTED FAULTY SRUs

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | U 911         |            | 0          | 0          | 1        | 8        | 5.07       |     |
| 451X6B | U 911         |            | 35         | 31         | 29       | 8        | 5.07       |     |
| 451X6  | U 911         |            | 14         | 15         | 14       | 8        | 5.07       |     |
| 451X6A | U 921         |            | 0          | 0          | 0        | 4        | 5.18       |     |
| 451X6B | U 921         |            | 8          | 9          | 8        | 4        | 5.18       |     |
| 451X6  | U 921         |            | 3          | 5          | 4        | 4        | 5.18       |     |
| 451X6A | U 959         |            | 0          | 0          | 0        | 10       | 4.53       |     |
| 451X6B | U 959         |            | 31         | 33         | 28       | 10       | 4.53       |     |
| 451X6  | U 959         |            | 12         | 16         | 14       | 10       | 4.53       |     |
| 451X6A | U 970         |            | 0          | 0          | 1        | 4        | 4.30       |     |
| 451X6B | U 970         |            | 0          | 7          | 10       | 4        | 4.30       |     |
| 451X6  | U 970         |            | 0          | 3          | 5        | 4        | 4.30       |     |
| 451X6A | U 990         |            | 0          | 0          | 1        | 8        | 4.26       |     |
| 451X6B | U 990         |            | 31         | 36         | 33       | 8        | 4.26       |     |
| 451X6  | U 990         |            | 12         | 18         | 16       | 8        | 4.26       |     |
| 451X6A | U1009         |            | 0          | 0          | 1        | 2        | 4.26       |     |
| 451X6B | U1009         |            | 0          | 5          | 8        | 2        | 4.26       |     |
| 451X6  | U1009         |            | 0          | 2          | 4        | 2        | 4.26       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES

U 911 ISOLATE MALFUNCTIONS IN ARC-164 TEST SETS

U 921 ISOLATE MALFUNCTIONS IN ARM-173 TEST SETS TO COMPONENT  
LEVEL

U 959 PERFORM OPERATIONAL TESTS OF ARC-164 TEST SETS

U 970 PERFORM OPERATIONAL TESTS OF ARM-173 TEST SETS

U 990 PERFORM OPERATIONAL TESTS OF UHF MOCKUP TEST EQUIPMENT

U1009 REMOVE OR REPLACE ARM-173 TEST SET COMPONENTS

**TASK NUMBER: 60660**

**TASK STATEMENT:**

MAINTAIN UHF TEST ADAPTER

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
DIGITAL MULTIMETER  
HEADSET AND MICROPHONE  
OSCILLOSCOPE  
POWER SUPPLY  
RADIO TEST SET  
TEST ADAPTER

**REFERENCES:**

12R-2ARC-164-12

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ISOLATE MALFUNCTION IN UHF TEST ADAPTER (U939)  
A OPERATIONALLY CHECK UHF TEST ADAPTERS  
A ORDER PARTS  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE UHF TEST ADAPTER COMPONENTS (U1026)

**SKILLS:**

S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S USE DIGITAL MULTIMETER  
S USE HEADSET AND MICROPHONE  
S USE OSCILLOSCOPE  
S USE POWER SUPPLY  
S USE RADIO TEST SET  
S USE TEST ADAPTER

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY AC CIRCUIT THEORY OF OPERATION

**KNOWLEDGE :**

K APPLY CAPACITOR THEORY OF OPERATION  
 K APPLY CLAMPER CIRCUIT THEORY OF OPERATION  
 K APPLY DC CIRCUIT THEORY OF OPERATION  
 K APPLY INDUCTOR THEORY OF OPERATION  
 K APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATION  
 K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY POWER SUPPLY FILTER THEORY OF OPERATION  
 K APPLY POWER SUPPLY RECTIFIER THEORY OF OPERATION  
 K APPLY POWER SUPPLY THEORY OF OPERATION  
 K APPLY RCL CIRCUIT THEORY OF BASIC OPERATION  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY TECHNICAL DATA  
 K ISOLATE FAULTY AC CIRCUITS  
 K ISOLATE FAULTY CAPACITORS  
 K ISOLATE FAULTY CLAMPER CIRCUITS  
 K ISOLATE FAULTY DC CIRCUITS  
 K ISOLATE FAULTY INDUCTORS  
 K ISOLATE FAULTY LIMITER CIRCUIT DIODES  
 K ISOLATE FAULTY LIMITER TRANSISTOR CIRCUITS  
 K ISOLATE FAULTY POWER SUPPLIES  
 K ISOLATE FAULTY POWER SUPPLY FILTERS  
 K ISOLATE FAULTY POWER SUPPLY RECTIFIERS  
 K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION  
 PROCEDURES (F 278)  
 K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
 K TROUBLESHOOT LIMITER CIRCUIT DIODES  
 K TROUBLESHOOT LIMITER CIRCUIT TRANSISTORS  
 K TROUBLESHOOT POWER SUPPLY CIRCUITS  
 K TROUBLESHOOT POWER SUPPLY FILTERS  
 K TROUBLESHOOT POWER SUPPLY RECTIFIERS  
 K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | U 939         |            | 0          | 0          | 0        | 4        | 4.96       |     |
| 451X6B | U 939         |            | 8          | 14         | 17       | 4        | 4.96       |     |
| 451X6  | U 939         |            | 3          | 7          | 8        | 4        | 4.96       |     |
| 451X6A | U1026         |            | 0          | 0          | 1        | 3        | 3.88       |     |
| 451X6B | U1026         |            | 15         | 16         | 16       | 3        | 3.88       |     |
| 451X6  | U1026         |            | 6          | 8          | 8        | 3        | 3.88       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
U 939 ISOLATE MALFUNCTIONS IN UHF TEST ADAPTERS  
U1026 REMOVE OR REPLACE UHF TEST ADAPTER COMPONENTS

**TASK NUMBER: 60670**

**TASK STATEMENT:** .

PERFORM OPERATIONAL TESTS OF LRUs THAT COMPRISE THE ARC-190 HF SYSTEM

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

ANTENNA SIMULATOR TEST SET  
AUDIO OSCILLATOR  
COUPLER TEST SET  
CTK  
DISTORTION ANALYZER  
DVM  
ESD PROTECTIVE EQUIPMENT  
HF TEST SET  
HIGH POWER TERMINATION  
OSCILLOSCOPE  
RF POWER METER  
RF SIGNAL GENERATOR  
SPECTRUM ANALYZER

**REFERENCES:**

12R2-2ARC-190-2  
12R2-4-242-2  
12R2-2ARC190-3-2

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR; FUNCTIONAL CHECK

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A EXECUTE TEST

**SKILLS:**

S CONNECT LRU TO TEST SETS  
S PERFORM VISUAL INSPECTIONS  
S USE ANTENNA SIMULATOR TEST SET  
S USE AUDIO OSCILLATOR  
S USE COMMON HANDTOOLS  
S USE COUPLER TEST SET  
S USE DISTORTION ANALYZER TO CHECK POWER OUTPUT

**SKILLS:**

S USE DVM TO CHECK VOLTAGES  
 S USE HF TEST SET  
 S USE HIGH POWER TERMINATION TO ABSORB HIGH POWER  
 S USE OSCILLOSCOPE TO CHECK VOLTAGES  
 S USE RF POWER METER TO CHECK POWER  
 S USE RF SIGNAL GENERATOR TO GENERATE SIGNALS FOR R/T  
 S USE SPECTRUM ANALYZER TO TRANSMIT

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY ESD PRECAUTIONS  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 243         |            | 61         | 62         | 65       | 39       | 4.32       |     |
| 451X6B | F 243         |            | 50         | 60         | 59       | 39       | 4.32       |     |
| 451X6  | F 243         |            | 55         | 60         | 62       | 39       | 4.32       |     |
| 451X6A | U 963         |            | 0          | 0          | 0        | 7        | 4.71       |     |
| 451X6B | U 963         |            | 38         | 32         | 23       | 7        | 4.71       |     |
| 451X6  | U 963         |            | 15         | 15         | 11       | 7        | 4.71       |     |
| 451X6A | U 967         |            | 0          | 0          | 0        | 8        | 4.40       |     |
| 451X6B | U 967         |            | 35         | 32         | 24       | 8        | 4.40       |     |
| 451X6  | U 967         |            | 14         | 15         | 12       | 8        | 4.40       |     |
| 451X6A | U 968         |            | 0          | 0          | 0        | 6        | 4.25       |     |
| 451X6B | U 968         |            | 31         | 25         | 18       | 6        | 4.25       |     |
| 451X6  | U 968         |            | 12         | 12         | 9        | 6        | 4.25       |     |
| 451X6A | U 969         |            | 0          | 0          | 0        | 8        | 4.92       |     |
| 451X6B | U 969         |            | 46         | 36         | 27       | 8        | 4.92       |     |
| 451X6  | U 969         |            | 18         | 18         | 13       | 8        | 4.92       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 243 PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECTION (T AND I)  
 OF LRU<sub>s</sub> ISSUED FROM SUPPLY  
 U 963 PERFORM OPERATIONAL TESTS OF ARC-190 ANTENNA COUPLERS  
 U 967 PERFORM OPERATIONAL TESTS OF ARC-190 RADIO SET CONTROLS  
 U 968 PERFORM OPERATIONAL TESTS OF ARC-190 RADIO SYSTEM MOUNTS  
 U 969 PERFORM OPERATIONAL TESTS OF ARC-190 RECEIVER-TRANSMITTERS

**TASK NUMBER:** 60680

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN LRUs THAT COMPRISE THE ARC-190 HF SYSTEM

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

ANTENNA SIMULATOR TEST SET  
AUDIO OSCILLATOR  
COUPLER TEST SET  
CTK  
DISTORTION ANALYZER  
DVM  
ESD PROTECTIVE EQUIPMENT  
HF TEST SET  
HIGH POWER TERMINATION  
OSCILLOSCOPE  
RF POWER METER  
RF SIGNAL GENERATOR  
SPECTRUM ANALYZER

**REFERENCES:**

12R2-2ARC-190-2  
12R2-4-242-2  
12R2-2ARC190-3-2

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**SKILLS:**

S PERFORM VISUAL INSPECTIONS  
S USE ANTENNA SIMULATOR TEST SET  
S USE AUDIO OSCILLATOR  
S USE COMMON HANDTOOLS  
S USE COUPLER TEST SET  
S USE DISTORTION ANALYZER TO CHECK POWER OUTPUT  
S USE DVM TO CHECK VOLTAGES  
S USE HF TEST SET  
S USE HIGH POWER TERMINATOR TO ABSORB HIGH POWER  
S USE OSCILLOSCOPE TO CHECK VOLTAGES

**SKILLS:**

S USE RF POWER METER TO CHECK POWER  
 S USE RF SIGNAL GENERATOR TO GENERATE SIGNALS FOR R/T  
 S USE SPECTRUM ANALYZER TO TRANSMIT

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY AC CIRCUIT THEORY OF OPERATION  
 K APPLY DC CIRCUIT THEORY OF OPERATION  
 K APPLY ESD PRECAUTIONS  
 K APPLY LRU THEORY OF OPERATION  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY RCL CIRCUIT THEORY OF BASIC OPERATION  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY SPEAKER THEORY OF OPERATION  
 K APPLY TECHNICAL DATA  
 K APPLY COMPUTER MEMORY THEORY OF OPERATION  
 K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING  
 K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION  
 PROCEDURES (F 278)  
 K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
 K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
 K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | U 915         |            | 0          | 0          | 0        | 7        | 5.17       |     |
| 451X6B | U 915         |            | 35         | 24         | 19       | 7        | 5.17       |     |
| 451X6  | U 915         |            | 14         | 11         | 9        | 7        | 5.17       |     |
| 451X6A | U 918         |            | 0          | 0          | 0        | 6        | 5.36       |     |
| 451X6B | U 918         |            | 23         | 20         | 18       | 6        | 5.36       |     |
| 451X6  | U 918         |            | 9          | 10         | 9        | 6        | 5.36       |     |
| 451X6A | U 919         |            | 0          | 0          | 0        | 5        | 4.59       |     |
| 451X6B | U 919         |            | 27         | 19         | 17       | 5        | 4.59       |     |
| 451X6  | U 919         |            | 11         | 9          | 8        | 5        | 4.59       |     |
| 451X6A | U 920         |            | 0          | 0          | 0        | 6        | 5.43       |     |
| 451X6B | U 920         |            | 38         | 27         | 19       | 6        | 5.43       |     |
| 451X6  | U 920         |            | 15         | 13         | 9        | 6        | 5.43       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

- F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES
- U 915 ISOLATE MALFUNCTIONS IN ARC-190 ANTENNA COUPLERS TO SRU
- U 918 ISOLATE MALFUNCTIONS IN ARC-190 RADIO SET CONTROLS TO SRU  
OR COMPONENT LEVEL
- U 919 ISOLATE MALFUNCTIONS IN ARC-190 RADIO SYSTEM MOUNTS TO  
COMPONENT LEVEL
- U 920 ISOLATE MALFUNCTIONS IN ARC-190 RECEIVER-TRANSMITTERS TO  
SRU

**TASK NUMBER:** 60690

**TASK STATEMENT:**

REPAIR LRUs THAT COMPRISE THE ARC-190 HF SYSTEM

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES

CTK

ESD PROTECTIVE EQUIPMENT

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

APPLICABLE IPB

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CLEAN CONTACTS (F 210)

A ORDER PARTS

A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)

A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)

A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)

A RESEAT SRUs

**SKILLS:**

S PERFORM VISUAL INSPECTIONS

S USE COMMON HANDTOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS

K APPLY ESD PRECAUTIONS

K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS

K APPLY SHOP SAFETY PRACTICES

K APPLY TECHNICAL DATA

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | U1002         |            | 0          | 0          | 0        | 5        | 4.05       |     |
| 451X6B | U1002         |            | 31         | 24         | 18       | 5        | 4.05       |     |
| 451X6  | U1002         |            | 12         | 11         | 9        | 5        | 4.05       |     |
| 451X6A | U1006         |            | 0          | 0          | 0        | 5        | 4.26       |     |
| 451X6B | U1006         |            | 23         | 19         | 17       | 5        | 4.26       |     |
| 451X6  | U1006         |            | 9          | 9          | 9        | 5        | 4.26       |     |
| 451X6A | U1007         |            | 0          | 0          | 0        | 5        | 4.01       |     |
| 451X6B | U1007         |            | 23         | 16         | 14       | 5        | 4.01       |     |
| 451X6  | U1007         |            | 9          | 8          | 7        | 5        | 4.01       |     |
| 451X6A | U1008         |            | 0          | 0          | 0        | 4        | 4.41       |     |
| 451X6B | U1008         |            | 42         | 26         | 19       | 4        | 4.41       |     |
| 451X6  | U1008         |            | 17         | 12         | 9        | 4        | 4.41       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
 F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
 LINE REPLACEABLE UNITS (LRU)  
 U1002 REMOVE OR REPLACE ARC-190 ANTENNA COUPLER SRUs  
 U1006 REMOVE OR REPLACE ARC-190 RADIO SET CONTROL SRUs OR  
 COMPONENTS  
 U1007 REMOVE OR REPLACE ARC-190 RADIO SYSTEM MOUNT COMPONENTS  
 U1008 REMOVE OR REPLACE ARC-190 RECEIVER-TRANSMITTER SRUs

**TASK NUMBER:** 60700

**TASK STATEMENT:**

MAINTAIN TEST SETS USED WITH THE ARC-190 HF SYSTEM

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
ESD PROTECTIVE EQUIPMENT  
MULTIMETER  
OSCILLOSCOPE

**REFERENCES:**

33D7-71-40-1

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

- A ISOLATE MALFUNCTIONS IN ARC-190 TEST SETS
- A ORDER PARTS
- A PERFORM OPERATIONAL TESTS OF ARC-190 TEST SETS
- A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)
- A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)

**SKILLS:**

- S PERFORM VISUAL INSPECTIONS
- S USE COMMON HANDTOOLS
- S USE MULTIMETER TO CHECK VOLTAGES AND CONTINUITY
- S USE OSCILLOSCOPE TO CHECK DIGITAL CIRCUITS

**KNOWLEDGE:**

- K ANNOTATE FORMS
- K APPLY AC CIRCUIT THEORY OF OPERATION
- K APPLY DC CIRCUIT THEORY OF OPERATION
- K APPLY ESD PRECAUTIONS
- K APPLY FLIP-FLOP THEORY OF OPERATION
- K APPLY MAIN LOGIC GATE THEORY OF OPERATION
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY RCL CIRCUIT THEORY OF BASIC OPERATION
- K APPLY SHOP SAFETY PROCEDURES

**KNOWLEDGE:**

K APPLY TECHNICAL DATA  
 K ISOLATE FAULTY FLIP-FLOPS  
 K ISOLATE FAULTY MAIN LOGIC GATES  
 K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION  
 PROCEDURES (F 278)  
 K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
 K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | U 914         |            | 0          | 0          | 0        | 7        | 5.43       |     |
| 451X6B | U 914         |            | 19         | 19         | 17       | 7        | 5.43       |     |
| 451X6  | U 914         |            | 8          | 9          | 8        | 7        | 5.43       |     |
| 451X6A | U 916         |            | 0          | 0          | 0        | 6        | 5.34       |     |
| 451X6B | U 916         |            | 15         | 18         | 16       | 6        | 5.34       |     |
| 451X6  | U 916         |            | 6          | 8          | 8        | 6        | 5.34       |     |
| 451X6A | U 917         |            | 0          | 0          | 0        | 7        | 5.68       |     |
| 451X6B | U 917         |            | 31         | 21         | 19       | 7        | 5.68       |     |
| 451X6  | U 917         |            | 12         | 10         | 9        | 7        | 5.68       |     |
| 451X6A | U 964         |            | 0          | 0          | 0        | 5        | 4.55       |     |
| 451X6B | U 964         |            | 31         | 25         | 16       | 5        | 4.55       |     |
| 451X6  | U 964         |            | 12         | 12         | 8        | 5        | 4.55       |     |
| 451X6A | U 965         |            | 0          | 0          | 0        | 5        | 4.57       |     |
| 451X6B | U 965         |            | 38         | 29         | 18       | 5        | 4.57       |     |
| 451X6  | U 965         |            | 15         | 14         | 9        | 5        | 4.57       |     |
| 451X6A | U 966         |            | 0          | 0          | 0        | 8        | 4.64       |     |
| 451X6B | U 966         |            | 38         | 31         | 24       | 8        | 4.64       |     |
| 451X6  | U 966         |            | 15         | 15         | 12       | 8        | 4.64       |     |
| 451X6A | U1003         |            | 0          | 0          | 0        | 4        | 3.97       |     |
| 451X6B | U1003         |            | 23         | 15         | 12       | 4        | 3.97       |     |
| 451X6  | U1003         |            | 9          | 7          | 6        | 4        | 3.97       |     |
| 451X6A | U1004         |            | 0          | 0          | 0        | 5        | 4.04       |     |
| 451X6B | U1004         |            | 23         | 15         | 13       | 5        | 4.04       |     |
| 451X6  | U1004         |            | 9          | 7          | 6        | 5        | 4.04       |     |
| 451X6A | U1005         |            | 0          | 0          | 0        | 5        | 4.17       |     |
| 451X6B | U1005         |            | 31         | 21         | 18       | 5        | 4.17       |     |
| 451X6  | U1005         |            | 12         | 10         | 9        | 5        | 4.17       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
U 914 ISOLATE MALFUNCTIONS IN ARC-190 ANTENNA COUPLER TEST SETS  
TO SRU OR COMPONENT LEVEL  
U 916 ISOLATE MALFUNCTIONS IN ARC-190 ANTENNA SIMULATOR TEST SETS  
TO SRU OR COMPONENT LEVEL  
U 917 ISOLATE MALFUNCTIONS IN ARC-190 HIGH FREQUENCY (HF) TEST  
SETS TO SRU OR COMPONENT LEVEL  
U 964 PERFORM OPERATIONAL TESTS OF ARC-190 ANTENNA SIMULATOR TEST  
SETS  
U 965 PERFORM OPERATIONAL TESTS OF ARC-190 COUPLER TEST SETS  
U 966 PERFORM OPERATIONAL TESTS OF ARC-190 HF TEST SETS  
U1003 REMOVE OR REPLACE ARC-190 ANTENNA SIMULATOR TEST SET SRUs  
OR COMPONENTS  
U1004 REMOVE OR REPLACE ARC-190 COUPLER TEST SET SRUs OR  
COMPONENTS  
U1005 REMOVE OR REPLACE ARC-190 HF TEST SET SRUs OR COMPONENTS

**TASK NUMBER: 60710**

**TASK STATEMENT:**

PERFORM OPERATIONAL TESTS OF LRU<sub>s</sub> THAT COMPRISE THE ILS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
DIGITAL MULTIMETER  
FREQUENCY COUNTER  
OSCILLOSCOPE  
SPECTRUM ANALYZER  
SYNTHESIZED SWEEPER

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR; VERIFICATION OF SHOP  
STANDARD; NEW ISSUE FROM SUPPLY; FUNCTIONAL CHECK

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A EXECUTE TEST

**SKILLS:**

S CONNECT LRU TO TEST SETS  
S LOAD COMPUTER PROGRAM  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S USE DIGITAL MULTIMETER TO CHECK GROUNDING  
S USE FREQUENCY COUNTER TO CHECK SIGNAL FREQUENCY RISE/FALL  
TIME PULSES  
S USE OSCILLOSCOPE TO CHECK WAVEFORMS  
S USE SPECTRUM ANALYZER TO CHECK OUT FREQUENCY RESPONSE  
S USE SYNTHESIZED SWEEPER TO APPLY RF ENERGY

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K USE METRIC NOTATION

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 243         |            | 61         | 62         | 65       | 39       | 4.32       |     |
| 451X6B | F 243         |            | 50         | 60         | 59       | 39       | 4.32       |     |
| 451X6  | F 243         |            | 55         | 60         | 62       | 39       | 4.32       |     |
| 451X6A | U 982         |            | 3          | 2          | 2        | 4        | 4.45       |     |
| 451X6B | U 982         |            | 19         | 27         | 19       | 4        | 4.45       |     |
| 451X6  | U 982         |            | 9          | 14         | 10       | 4        | 4.45       |     |
| 451X6A | U 983         |            | 3          | 2          | 2        | 4        | 4.41       |     |
| 451X6B | U 983         |            | 15         | 27         | 20       | 4        | 4.41       |     |
| 451X6  | U 983         |            | 8          | 14         | 10       | 4        | 4.41       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 243 PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECTION (T AND I)  
OF LRUs ISSUED FROM SUPPLY  
U 982 PERFORM OPERATIONAL TESTS OF ILS GLIDE SLOPE MARKER BEACON  
RECEIVERS  
U 983 PERFORM OPERATIONAL TESTS OF ILS LOCALIZER RECEIVERS

**TASK NUMBER: 60720**

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN LRUs THAT COMPRISE THE ILS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
ESD PROTECTIVE EQUIPMENT  
DIGITAL MULTIMETER  
FREQUENCY COUNTER  
OSCILLOSCOPE  
SPECTRUM ANALYZER  
SYNTHESIZED SWEEPER

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**SKILLS:**

S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S USE DIGITAL MULTIMETER TO CHECK GROUNDING  
S USE FREQUENCY COUNTER TO CHECK SIGNAL FREQUENCY RISE/FALL  
TIME PULSES  
S USE OSCILLOSCOPE TO CHECK WAVEFORMS  
S USE SPECTRUM ANALYZER TO CHECK CUT FREQUENCY RESPONSE  
S USE SYNTHESIZED SWEEPER TO APPLY RF ENERGY

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY AC CIRCUIT THEORY OF OPERATION  
K APPLY AM RECEIVER THEORY OF OPERATION  
K APPLY DC CIRCUIT THEORY OF OPERATION  
K APPLY ESD PRECAUTIONS  
K APPLY FREQUENCY SENSITIVE FILTER THEORY OF OPERATION  
K APPLY LRU THEORY OF OPERATION  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS

**KNOWLEDGE:**

K APPLY SHOP SAFETY PROCEDURES  
 K APPLY TECHNICAL DATA  
 K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING  
 K ISOLATE FAULTY AC CIRCUITS  
 K ISOLATE FAULTY AM RECEIVERS  
 K ISOLATE FAULTY DC CIRCUITS  
 K ISOLATE FAULTY FREQUENCY SENSITIVE FILTERS  
 K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)  
 K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
 K USE METRIC NOTATION  
 K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
 K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | U 932         |            | 0          | 1          | 2        | 5        | 5.73       |     |
| 451X6B | U 932         |            | 15         | 25         | 18       | 5        | 5.73       |     |
| 451X6  | U 932         |            | 6          | 12         | 10       | 5        | 5.73       |     |
| 451X6A | U 933         |            | 0          | 1          | 2        | 5        | 5.77       |     |
| 451X6B | U 933         |            | 15         | 24         | 18       | 5        | 5.77       |     |
| 451X6  | U 933         |            | 6          | 12         | 10       | 5        | 5.77       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
 U 932 ISOLATE MALFUNCTIONS IN ILS GLIDE SLOPE MARKER BEACON  
 RECEIVERS TO SRU OR COMPONENT LEVEL  
 U 933 ISOLATE MALFUNCTIONS IN ILS LOCALIZER RECEIVERS TO SRU OR  
 COMPONENT LEVEL

**TASK NUMBER: 60730**

**TASK STATEMENT:**

REPAIR LRUs THAT COMPRISE THE ILS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES  
CTK  
ESD PROTECTIVE EQUIPMENT  
SOLDERING STATION

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
APPLICABLE IPB

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CLEAN CONTACTS (F 210)  
A ORDER PARTS  
A PERFORM ALIGNMENT  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)

**SKILLS:**

S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S SOLDER OR DESOLDER TERMINAL CONNECTIONS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY ESD PRECAUTIONS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K USE METRIC NOTATION

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | U 896         |            | 3          | 1          | 1        | 5        | 5.30       |     |
| 451X6B | U 896         |            | 19         | 29         | 20       | 5        | 5.30       |     |
| 451X6  | U 896         |            | 9          | 15         | 10       | 5        | 5.30       |     |
| 451X6A | U 897         |            | 3          | 1          | 2        | 4        | 5.40       |     |
| 451X6B | U 897         |            | 15         | 28         | 20       | 4        | 5.40       |     |
| 451X6  | U 897         |            | 8          | 14         | 10       | 4        | 5.40       |     |
| 451X6A | U1021         |            | 3          | 1          | 1        | 3        | 4.32       |     |
| 451X6B | U1021         |            | 15         | 26         | 18       | 3        | 4.32       |     |
| 451X6  | U1021         |            | 8          | 13         | 9        | 3        | 4.32       |     |
| 451X6A | U1022         |            | 3          | 1          | 1        | 3        | 4.23       |     |
| 451X6B | U1022         |            | 15         | 25         | 17       | 3        | 4.23       |     |
| 451X6  | U1022         |            | 8          | 12         | 9        | 3        | 4.23       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
 F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
 LINE REPLACEABLE UNITS (LRU)  
 U 896 ALIGN ILS LOCALIZER RECEIVERS  
 U 897 ALIGN INSTRUMENT LANDING SYSTEM (ILS) GLIDE SLOPE MARKER  
 BEACON RECEIVERS  
 U1021 REMOVE OR REPLACE ILS GLIDE SLOPE MARKER BEACON RECEIVER  
 SRUs OR COMPONENTS  
 U1022 REMOVE OR REPLACE ILS LOCALIZER RECEIVER SRUs OR COMPONENTS

**TASK NUMBER: 60740**

**TASK STATEMENT:**

PERFORM OPERATIONAL TESTS OF LRUs THAT COMPRISE THE ARN-118 TACAN SYSTEM

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
DIGITAL VOLTMETER  
ESD PROTECTIVE EQUIPMENT  
TACAN TEST SET AN/ALR-135A  
TACAN TEST SET 972V-1

**REFERENCES:**

00-25-234  
12R-2-ARN118-12  
12R5-2ARN118-1

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR; NEW ISSUE FROM SUPPLY;  
FUNCTIONAL CHECK

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A EXECUTE TEST

**SKILLS:**

S CONNECT LRU TO TEST SETS  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S USE DIGITAL VOLTMETER TO CHECK VOLTAGES  
S USE TACAN TEST SETS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY ESD PRECAUTIONS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 243         |            | 61         | 62         | 65       | 39       | 4.32       |     |
| 451X6B | F 243         |            | 50         | 60         | 59       | 39       | 4.32       |     |
| 451X6  | F 243         |            | 55         | 60         | 62       | 39       | 4.32       |     |
| 451X6A | U 971         |            | 0          | 0          | 1        | 9        | 4.21       |     |
| 451X6B | U 971         |            | 31         | 35         | 28       | 9        | 4.21       |     |
| 451X6  | U 971         |            | 12         | 17         | 14       | 9        | 4.21       |     |
| 451X6A | U 972         |            | 0          | 0          | 1        | 9        | 3.97       |     |
| 451X6B | U 972         |            | 19         | 20         | 21       | 9        | 3.97       |     |
| 451X6  | U 972         |            | 8          | 10         | 10       | 9        | 3.97       |     |
| 451X6A | U 974         |            | 0          | 0          | 1        | 9        | 4.10       |     |
| 451X6B | U 974         |            | 31         | 35         | 29       | 9        | 4.10       |     |
| 451X6  | U 974         |            | 12         | 17         | 14       | 9        | 4.10       |     |
| 451X6A | U 975         |            | 0          | 0          | 1        | 11       | 4.64       |     |
| 451X6B | U 975         |            | 46         | 45         | 34       | 11       | 4.64       |     |
| 451X6  | U 975         |            | 18         | 21         | 17       | 11       | 4.64       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 243 PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECTION (T AND I)  
OF LRUs ISSUED FROM SUPPLY

U 971 PERFORM OPERATIONAL TESTS OF ARN-118 TACAN CONVERTER-  
ADAPTERS

U 972 PERFORM OPERATIONAL TESTS OF ARN-118 TACAN ELECTRICAL  
EQUIPMENT MOUNTING BASES

U 974 PERFORM OPERATIONAL TESTS OF ARN-118 TACAN RADIO SET  
CONTROLS

U 975 PERFORM OPERATIONAL TESTS OF ARN-118 TACAN RECEIVER-  
TRANSMITTERS

**TASK NUMBER: 60750**

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN LRUs THAT COMPRISE THE ARN-118 TACAN SYSTEM

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
ESD PROTECTIVE EQUIPMENT  
MULTIMETER  
OSCILLOSCOPE  
TACAN TEST SET AN/ALR-135A  
TACAN TEST SET 972V-1

**REFERENCES:**

00-25-234  
12R-2-ARN118-12  
12R5-2ARN118-1

**CONDITIONS:**

KNOWN GOOD SHOP STANDARD

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**SKILLS:**

S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S USE MULTIMETER TO CHECK VOLTAGE  
S USE OSCILLOSCOPE TO CHECK LOGIC LEVELS (927V-1)  
S USE TACAN TEST SETS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY AC CIRCUIT THEORY OF OPERATION  
K APPLY DC CIRCUIT THEORY OF OPERATION  
K APPLY ESD PRECAUTIONS  
K APPLY INTEGRATED CIRCUIT THEORY OF OPERATION  
K APPLY LRU THEORY OF OPERATION

**KNOWLEDGE:**

K APPLY MAIN LOGIC GATE THEORY OF OPERATION  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY RCL CIRCUIT THEORY OF BASIC OPERATION  
 K APPLY RELAY THEORY OF OPERATION  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY TACAN SYSTEM THEORY OF OPERATION  
 K APPLY TECHNICAL DATA  
 K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING  
 K ISOLATE FAULTY AC CIRCUITS  
 K ISOLATE FAULTY DC CIRCUITS  
 K ISOLATE FAULTY INTEGRATED CIRCUITS  
 K ISOLATE FAULTY MAIN LOGIC GATES  
 K ISOLATE FAULTY RCL CIRCUITS  
 K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)  
 K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
 K TROUBLESHOOT AC CIRCUITS  
 K TROUBLESHOOT DC CIRCUITS  
 K TROUBLESHOOT RCL CIRCUITS  
 K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
 K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | U 922         |            | 0          | 0          | 1        | 9        | 5.02       |     |
| 451X6B | U 922         |            | 27         | 34         | 27       | 9        | 5.02       |     |
| 451X6  | U 922         |            | 11         | 16         | 13       | 9        | 5.02       |     |
| 451X6A | U 923         |            | 0          | 0          | 1        | 8        | 4.80       |     |
| 451X6B | U 923         |            | 19         | 22         | 23       | 8        | 4.80       |     |
| 451X6  | U 923         |            | 8          | 11         | 11       | 8        | 4.80       |     |
| 451X6A | U 924         |            | 0          | 0          | 1        | 9        | 4.75       |     |
| 451X6B | U 924         |            | 27         | 31         | 24       | 9        | 4.75       |     |
| 451X6  | U 924         |            | 11         | 15         | 12       | 9        | 4.75       |     |
| 451X6A | U 925         |            | 0          | 0          | 1        | 8        | 5.06       |     |
| 451X6B | U 925         |            | 38         | 34         | 27       | 8        | 5.06       |     |
| 451X6  | U 925         |            | 15         | 16         | 13       | 8        | 5.06       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

- F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES
- U 922 ISOLATE MALFUNCTIONS IN ARN-118 TACAN CONVERTER-ADAPTERS TO  
SRUs
- U 923 ISOLATE MALFUNCTIONS IN ARN-118 TACAN RADIO MOUNTS TO  
COMPONENT LEVEL
- U 924 ISOLATE MALFUNCTIONS IN ARN-118 TACAN RADIO SET CONTROLS TO  
SRU OR COMPONENT LEVEL
- U 925 ISOLATE MALFUNCTIONS IN ARN-118 TACAN RECEIVER-TRANSMITTERS  
TO SRU

**TASK NUMBER: 60760**

**TASK STATEMENT:**

REPAIR LRUs THAT COMPRISE THE ARN-118 TACAN SYSTEM

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES  
CTK  
ESD PROTECTIVE EQUIPMENT  
FREQUENCY COUNTER  
MULTIMETER  
OSCILLOSCOPE  
TACAN TEST SET AN/ALR-135A  
TACAN TEST SET 972V-1

**REFERENCES:**

00-25-234  
12R-2-ARN118-12  
12R5-2ARN118-1

**QUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN SRUs  
A CLEAN CONTACTS (F 210)  
A ORDER PARTS  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)  
A REPAIR WIRING (TASK NUMBER: 61440)  
A RESEAT SRUs

**SKILLS:**

S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S USE FREQUENCY COUNTER FOR IF GAIN ADJUSTMENT  
S USE OSCILLOSCOPE TO CHECK VOLTAGE  
S USE TEST SETS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY ESD PRECAUTIONS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | U 890         |            | 0          | 0          | 1        | 9        | 4.65       |     |
| 451X6B | U 890         |            | 27         | 36         | 29       | 9        | 4.65       |     |
| 451X6  | U 890         |            | 11         | 18         | 14       | 9        | 4.65       |     |
| 451X6A | U 891         |            | 0          | 0          | 1        | 9        | 4.28       |     |
| 451X6B | U 891         |            | 23         | 36         | 28       | 9        | 4.28       |     |
| 451X6  | U 891         |            | 9          | 18         | 14       | 9        | 4.28       |     |
| 451X6A | U 892         |            | 0          | 0          | 1        | 9        | 4.99       |     |
| 451X6B | U 892         |            | 42         | 45         | 31       | 9        | 4.99       |     |
| 451X6  | U 892         |            | 17         | 21         | 15       | 9        | 4.99       |     |
| 451X6A | U1010         |            | 0          | 0          | 0        | 6        | 4.08       |     |
| 451X6B | U1010         |            | 23         | 27         | 22       | 6        | 4.08       |     |
| 451X6  | U1010         |            | 9          | 13         | 11       | 6        | 4.08       |     |
| 451X6A | U1011         |            | 0          | 0          | 0        | 6        | 4.13       |     |
| 451X6B | U1011         |            | 23         | 22         | 19       | 6        | 4.13       |     |
| 451X6  | U1011         |            | 9          | 11         | 9        | 6        | 4.13       |     |
| 451X6A | U1012         |            | 0          | 0          | 0        | 6        | 4.03       |     |
| 451X6B | U1012         |            | 23         | 26         | 23       | 6        | 4.03       |     |
| 451X6  | U1012         |            | 9          | 12         | 11       | 6        | 4.03       |     |
| 451X6A | U1013         |            | 0          | 0          | 0        | 6        | 4.21       |     |
| 451X6B | U1013         |            | 31         | 33         | 26       | 6        | 4.21       |     |
| 451X6  | U1013         |            | 12         | 16         | 13       | 6        | 4.21       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
LINE REPLACEABLE UNITS (LRU)

**USAF JOB INVENTORY TASK STATEMENTS:**

U 890 ALIGN ARN-118 TACTICAL AIR NAVIGATION (TACAN) CONVERTER-  
ADAPTERS  
U 891 ALIGN ARN-118 TACAN RADIO SET CONTROLS  
U 892 ALIGN ARN-118 TACAN RECEIVER-TRANSMITTERS  
U1010 REMOVE OR REPLACE ARN-118 TACAN CONVERTER-ADAPTER SRUs  
U1011 REMOVE OR REPLACE ARN-118 TACAN MOUNT COMPONENTS  
U1012 REMOVE OR REPLACE ARN-118 TACAN RADIO SET CONTROL SRUs OR  
COMPONENTS  
U1013 REMOVE OR REPLACE ARN-118 TACAN RECEIVER-TRANSMITTERS SRUs

**TASK NUMBER:** 60770

**TASK STATEMENT:** .

MAINTAIN TACAN TEST SETS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES  
CTK  
FREQUENCY COUNTER  
MULTIMETER  
OSCILLOSCOPE  
TACAN LRUs

**REFERENCES:**

33D2-8-383-1  
00-25-234

**CONDITIONS:**

KNOWN GOOD SHOP STANDARD

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN SRUs  
A CLEAN CONTACTS (F 210)  
A ISOLATE MALFUNCTIONS IN TACAN TEST SETS  
A ORDER PARTS  
A PERFORM OPERATIONAL TESTS OF TACAN LRUs  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)  
A REPAIR WIRING (TASK NUMBER: 61440)  
A RESEAT SRUs

**SKILLS:**

S CONNECT LRU TO TEST SETS  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S USE FREQUENCY COUNTER FOR IF GAIN ADJUSTMENT

**SKILLS:**

S USE LRU<sub>s</sub>  
 S USE MULTIMETER TO CHECK VOLTAGE AND CONTINUITY  
 S USE OSCILLOSCOPE TO READ PULSE TRAINS AND PERIOD PULSE

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY AC CIRCUIT THEORY OF OPERATION  
 K APPLY DC CIRCUIT THEORY OF OPERATION  
 K APPLY INTEGRATED CIRCUIT THEORY OF OPERATION  
 K APPLY MAIN LOGIC GATE THEORY OF OPERATION  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY RCL CIRCUIT THEORY OF BASIC OPERATION  
 K APPLY RELAY THEORY OF OPERATION  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY TECHNICAL DATA  
 K ISOLATE FAULTY AC CIRCUITS  
 K ISOLATE FAULTY DC CIRCUITS  
 K ISOLATE FAULTY INTEGRATED CIRCUITS  
 K ISOLATE FAULTY MAIN LOGIC GATES  
 K ISOLATE FAULTY RCL CIRCUITS  
 K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)  
 K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
 K TROUBLESHOOT AC CIRCUITS  
 K TROUBLESHOOT DC CIRCUITS  
 K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
 K VERIFY SUSPECTED FAULTY SRU<sub>s</sub>

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | U 941         |            | 0          | 0          | 1        | 5        | 5.55       |     |
| 451X6B | U 941         |            | 15         | 18         | 20       | 5        | 5.55       |     |
| 451X6  | U 941         |            | 6          | 8          | 10       | 5        | 5.55       |     |
| 451X6A | U 942         |            | 0          | 0          | 0        | 5        | 5.00       |     |
| 451X6B | U 942         |            | 4          | 8          | 9        | 5        | 5.00       |     |
| 451X6  | U 942         |            | 2          | 4          | 4        | 5        | 5.00       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | U 943         |            | 0          | 0          | 1        | 5        | 5.07       |     |
| 451X6B | U 943         |            | 15         | 18         | 18       | 5        | 5.07       |     |
| 451X6  | U 943         |            | 6          | 8          | 9        | 5        | 5.07       |     |
| 451X6A | U 986         |            | 0          | 0          | 1        | 7        | 4.52       |     |
| 451X6B | U 986         |            | 23         | 31         | 28       | 7        | 4.52       |     |
| 451X6  | U 986         |            | 9          | 15         | 14       | 7        | 4.52       |     |
| 451X6A | U1028         |            | 0          | 0          | 1        | 5        | 4.28       |     |
| 451X6B | U1028         |            | 8          | 7          | 11       | 5        | 4.28       |     |
| 451X6  | U1028         |            | 3          | 3          | 6        | 5        | 4.28       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
U 941 ISOLATE MALFUNCTIONS IN 972V-1 TACAN TEST SETS  
U 942 ISOLATE MALFUNCTIONS TO APM-135 TACAN TEST SETS  
U 943 ISOLATE MALFUNCTIONS TO APM-135A TACAN TEST SETS  
U 986 PERFORM OPERATIONAL TESTS OF TACAN MOCKUP TEST EQUIPMENT  
U1028 REMOVE OR REPLACE 972V-1 TEST SETS COMPONENTS

**TASK NUMBER: 60780**

**TASK STATEMENT:**

MAINTAIN APX-78 SYSTEM LRU<sub>s</sub>

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

APM-137 TEST SET  
APM-239A TEST SET  
APM-245 TEST SET  
CLEANING SOLVENTS AND BRUSHES  
CTK  
DIGITAL MULTIMETER  
ESD PROTECTIVE EQUIPMENT  
OSCILLOSCOPE  
PULSE/FUNCTION GENERATOR  
SPECTRUM ANALYZER  
SYNTHESIZED SWEEPER

**REFERENCES:**

12P4-2APX78-48-1

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

- A CLEAN CONTACTS (F 210)
- A ORDER PARTS
- A PERFORM OPERATIONAL TESTS OF LRU<sub>s</sub> THAT COMPRISE THE APX-78 SYSTEM
- A ISOLATE MALFUNCTIONS IN LRU<sub>s</sub> THAT COMPRISE THE APX-78 SYSTEM
- A ALIGN SRU<sub>s</sub>
- A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)
- A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)
- A REPAIR WIRING (TASK NUMBER: 61440)
- A TUNE OR ADJUST RESONANT CAVITIES

**SKILLS:**

- S CONNECT LRU TO TEST SETS
- S LOAD PROGRAM
- S PERFORM VISUAL INSPECTIONS

**SKILLS:**

S USE APM-137 TEST SET TO CHECK SIGNALS AND TEST POINTS, AND  
TO PROVIDE RF TO TEST LRU  
S USE APM-239A TEST SET TO POWER LRU, SIMULATE MODES, AND ROUTE  
SIGNALS  
S USE APM-245 TEST SET TO SIMULATE MODE IV COMPUTER  
S USE COMMON HANDTOOLS  
S USE DIGITAL MULTIMETER TO CHECK GROUNDING  
S USE OSCILLOSCOPE TO CHECK WAVEFORMS  
S USE PULSE/FUNCTION GENERATOR TO SYNCHRONIZE UNIT  
S USE SPECTRUM ANALYZER TO CHECK OUT FREQUENCY RESPONSE  
S USE SYNTHESIZED SWEEPER TO APPLY RF ENERGY

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY AM MODULATION TRANSMITTER THEORY OF OPERATION  
K APPLY ESD PRECAUTIONS  
K APPLY FM TRANSMITTER THEORY OF OPERATION  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY PULSE MODULATION TRANSMITTER THEORY OF OPERATION  
K APPLY RESONANT CAVITY THEORY OF OPERATION  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY SINGLE SIDEBAND TRANSMITTER THEORY OF OPERATION  
K APPLY TECHNICAL DATA  
K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION  
PROCEDURES (F 278)  
K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
K USE METRIC NOTATION  
K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | F 243         |            | 61         | 62         | 65       | 39       | 4.32       |     |
| 451X6B | F 243         |            | 50         | 60         | 59       | 39       | 4.32       |     |
| 451X6  | F 243         |            | 55         | 60         | 62       | 39       | 4.32       |     |
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | V1030         |            | 0          | 0          | 0        | 0        | 6.20       |     |
| 451X6B | V1030         |            | 0          | 1          | 0        | 0        | 6.20       |     |
| 451X6  | V1030         |            | 0          | 1          | 0        | 0        | 6.20       |     |
| 451X6A | V1056         |            | 0          | 0          | 0        | 0        | 6.38       |     |
| 451X6B | V1056         |            | 0          | 1          | 0        | 0        | 6.38       |     |
| 451X6  | V1056         |            | 0          | 1          | 0        | 0        | 6.38       |     |
| 451X6A | V1057         |            | 0          | 1          | 0        | 0        | 6.38       |     |
| 451X6B | V1057         |            | 0          | 1          | 1        | 0        | 6.38       |     |
| 451X6  | V1057         |            | 0          | 1          | 1        | 0        | 6.38       |     |
| 451X6A | V1098         |            | 0          | 0          | 0        | 0        | 4.79       |     |
| 451X6B | V1098         |            | 0          | 1          | 0        | 0        | 4.79       |     |
| 451X6  | V1098         |            | 0          | 1          | 0        | 0        | 4.79       |     |
| 451X6A | V1099         |            | 0          | 1          | 0        | 0        | 5.43       |     |
| 451X6B | V1099         |            | 0          | 1          | 1        | 0        | 5.43       |     |
| 451X6  | V1099         |            | 0          | 1          | 1        | 0        | 5.43       |     |
| 451X6A | V1116         |            | 0          | 0          | 0        | 0        | 5.42       |     |
| 451X6B | V1116         |            | 0          | 0          | 0        | 0        | 5.42       |     |
| 451X6  | V1116         |            | 0          | 0          | 0        | 0        | 5.42       |     |
| 451X6A | V1117         |            | 0          | 0          | 0        | 0        | 4.84       |     |
| 451X6B | V1117         |            | 0          | 0          | 0        | 0        | 4.84       |     |
| 451X6  | V1117         |            | 0          | 0          | 0        | 0        | 4.84       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS

F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
LINE REPLACEABLE UNITS (LRU)

F 243 PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECTION (T AND I)  
OF LRU<sub>s</sub> ISSUED FROM SUPPLY

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES

V1030 ALIGN APX-78 RADAR BEACON TRANSPONDER RECEIVER-TRANSMITTERS

V1056 ISOLATE MALFUNCTIONS IN APX-78 RADAR BEACON TRANSPONDER  
RADIO SET CONTROLS TO SRU OR COMPONENT LEVEL

V1057 ISOLATE MALFUNCTIONS IN APX-78 RADAR BEACON TRANSPONDER  
RECEIVER-TRANSMITTERS TO SRU OR COMPONENT LEVEL

V1098 PERFORM OPERATIONAL TESTS OF APX-78 RADAR BEACON  
TRANSPONDER RADIO SET CONTROLS

V1099 PERFORM OPERATIONAL TESTS OF APX-78 RADAR BEACON  
TRANSPONDER RECEIVER-TRANSMITTERS

V1116 REMOVE OR REPLACE APX-78 RADAR BEACON TRANSPONDER SYSTEM  
RECEIVER-TRANSMITTER SRU<sub>s</sub>

V1117 REMOVE OR REPLACE APX-78 RADIO SET CONTROL COMPONENTS

**TASK NUMBER: 60790**

**TASK STATEMENT:**

PERFORM OPERATIONAL TESTS OF THE AN/ALR-62 TEST STATION

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

DIGITAL MULTIMETER  
ESD PROTECTIVE EQUIPMENT  
OSCILLOSCOPE

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

SUSPECTED MALFUNCTION; 180 DAY PE; AFTER REPAIR; FUNCTIONAL CHECK

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A LOAD MAINTENANCE TAPE  
A EXECUTE TEST

**SKILLS:**

S CONNECT CABLES  
S CONNECT CALIBRATION BOXES  
S EXERCISE REGISTERS  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S USE DIGITAL MULTIMETER TO MEASURE RESISTANCE AND VOLTAGE  
S USE OSCILLOSCOPE TO MEASURE FREQUENCY, PULSE WIDTH, AND VOLTAGE  
S USE TEST STATION FREQUENCY METER  
S USE TEST STATION POWER METER

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY BASIC MATH PRINCIPLES

**KNOWLEDGE:**

K APPLY ESD PRECAUTIONS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K IDENTIFY VIDEO VOLTAGE SIGNALS  
K PERFORM OCTAL CONVERSIONS

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 244         |            | 47         | 66         | 72       | 38       | 5.10       |     |
| 451X6B | F 244         |            | 42         | 48         | 54       | 38       | 5.10       |     |
| 451X6  | F 244         |            | 45         | 56         | 64       | 38       | 5.10       |     |
| 451X6A | X1270         |            | 0          | 0          | 0        | 10       | 6.01       |     |
| 451X6B | X1270         |            | 8          | 16         | 21       | 10       | 6.01       |     |
| 451X6  | X1270         |            | 3          | 8          | 10       | 10       | 6.01       |     |
| 451X6A | X1271         |            | 0          | 0          | 1        | 10       | 5.49       |     |
| 451X6B | X1271         |            | 12         | 20         | 24       | 10       | 5.49       |     |
| 451X6  | X1271         |            | 5          | 10         | 12       | 10       | 5.49       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 244 PERFORM MAINTENANCE TAPE TESTS OF TEST STATIONS  
X1270 PERFORM OPERATIONAL TESTS OF CRS TEST STATIONS  
X1271 PERFORM OPERATIONAL TESTS OF DPTSs

**TASK NUMBER:** 60800

**TASK STATEMENT:** .

ISOLATE MALFUNCTIONS IN THE AN/ALR-62 TEST STATION

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
CAPACITOR TESTER  
DIGITAL MULTIMETER  
ESD PROTECTIVE EQUIPMENT  
FREQUENCY METER  
LOGIC PROBE  
OSCILLOSCOPE  
RF POWER METER  
SOLDERING STATION

**REFERENCES:**

APPLICABLE SHOP SYSTEMS TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
APPLICABLE TEST PROCEDURES TO

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A MEASURE TRANSMISSION POWER  
A PERFORM OPERATIONAL TEST OF AN/ALR-62 TEST  
STATION (TASK NUMBER: 60790)

**SKILLS:**

S CONNECT CABLES  
S CONNECT CALIBRATION BOXES  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S SOLDER OR DESOLDER TERMINAL CONNECTIONS  
S USE CAPACITOR TESTER

## SKILLS:

- S USE COMMON HANDTOOLS
- S USE DIGITAL MULTIMETER TO MEASURE RESISTANCE AND VOLTAGE
- S USE FREQUENCY METER
- S USE LOGIC PROBE
- S USE OSCILLOSCOPE TO MEASURE FREQUENCY, PULSE WIDTH, AND VOLTAGE
- S USE RF POWER METER TO CHECK RF POWER MEASUREMENTS

## KNOWLEDGE:

- K ANNOTATE FORMS
- K APPLY AC CIRCUIT THEORY OF OPERATION
- K APPLY AC MOTOR THEORY OF OPERATION
- K APPLY BIPOLAR JUNCTION TRANSISTOR THEORY OF OPERATION
- K APPLY CAPACITOR THEORY OF OPERATION
- K APPLY CHOPPER (SYNCHROUS VIBRATOR) THEORY OF OPERATION
- K APPLY CLAMPER CIRCUIT THEORY OF OPERATION
- K APPLY CMOS THEORY OF OPERATION
- K APPLY CRT THEORY OF OPERATION
- K APPLY DC CIRCUIT THEORY OF OPERATION
- K APPLY DISPLAY TUBE THEORY OF OPERATION
- K APPLY ESD PRECAUTIONS
- K APPLY FLIP-FLOP THEORY OF OPERATION
- K APPLY FREQUENCY SENSITIVE FILTER THEORY OF OPERATION
- K APPLY INDUCTOR THEORY OF OPERATION
- K APPLY INTEGRATED CIRCUIT THEORY OF OPERATION
- K APPLY LED THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT ZENER DIODE THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT COUNTER THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT REGISTER THEORY OF OPERATION
- K APPLY MAIN LOGIC GATE THEORY OF OPERATION
- K APPLY MICROWAVE OSCILLATOR OR AMPLIFIER THEORY OF OPERATION
- K APPLY MOSFET THEORY OF OPERATION
- K APPLY MULTIVIBRATOR CIRCUIT THEORY OF OPERATION
- K APPLY OPERATIONAL AMPLIFIER THEORY OF OPERATION
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY OSCILLATOR CIRCUIT THEORY OF OPERATION
- K APPLY PHOTSENSITIVE DEVICE THEORY OF OPERATION
- K APPLY POWER SUPPLY FILTER THEORY OF OPERATION
- K APPLY POWER SUPPLY RECTIFIER THEORY OF OPERATION
- K APPLY POWER SUPPLY THEORY OF OPERATION
- K APPLY RELAY THEORY OF OPERATION
- K APPLY RESISTOR THEORY OF OPERATION
- K APPLY SCR THEORY OF OPERATION
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY SOLID STATE DIODE THEORY OF OPERATION
- K APPLY SPEAKER THEORY OF OPERATION
- K APPLY TECHNICAL DATA
- K APPLY THEORY OF OPERATION OF COMPUTER MEMORIES MAGNETIC CORE
- K APPLY THREE-PHASE TRANSFORMER THEORY OF OPERATION
- K APPLY TRANSFORMER THEORY OF OPERATION

## KNOWLEDGE:

- K APPLY TRANSISTOR AMPLIFIER COUPLING CIRCUIT THEORY OF OPERATION
- K APPLY TRANSISTOR AMPLIFIER CIRCUIT THEORY OF OPERATION
- K APPLY TRANSISTOR AMPLIFIER STABILIZATION CIRCUIT THEORY OF OPERATION
- K APPLY TRANSMISSION LINE THEORY OF OPERATION
- K APPLY TTL THEORY OF OPERATION
- K APPLY VOLTAGE REGULATOR THEORY OF OPERATION
- K APPLY WAVESHAPING CIRCUIT THEORY OF OPERATION
- K APPLY WEIGHTED RESISTOR D/A CONVERTER THEORY OF OPERATION
- K APPLY ZENER DIODE THEORY OF OPERATION
- K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING
- K DETERMINE WHETHER MALFUNCTION IS IN TEST STATION, LRU, OR ADAPTER (TASK NUMBER: 61360)
- K DEVELOP BOOLEAN EQUATIONS FROM LOGIC DIAGRAMS
- K INTERPRET RESISTOR COLOR CODES
- K ISOLATE FAULTY AC CIRCUITS
- K ISOLATE FAULTY AC MOTORS
- K ISOLATE FAULTY BIPOLAR JUNCTION TRANSISTORS
- K ISOLATE FAULTY CAPACITORS
- K ISOLATE FAULTY CHOPPERS (SYNCHRONOUS VIBRATORS)
- K ISOLATE FAULTY CLAMPER CIRCUITS
- K ISOLATE FAULTY COMPUTER MEMORIES
- K ISOLATE FAULTY CRT
- K ISOLATE FAULTY DC CIRCUITS
- K ISOLATE FAULTY DISPLAY TUBES
- K ISOLATE FAULTY FLIP-FLOPS
- K ISOLATE FAULTY FREQUENCY SENSITIVE FILTERS
- K ISOLATE FAULTY INDUCTORS
- K ISOLATE FAULTY INTEGRATED CIRCUITS
- K ISOLATE FAULTY LEDs
- K ISOLATE FAULTY LIMITER CIRCUIT DIODES
- K ISOLATE FAULTY LIMITER CIRCUIT ZENER DIODES
- K ISOLATE FAULTY LIMITER TRANSISTOR CIRCUITS
- K ISOLATE FAULTY LOGIC COUNTERS
- K ISOLATE FAULTY MAIN LOGIC GATES
- K ISOLATE FAULTY MICROWAVE OSCILLATORS OR AMPLIFIERS
- K ISOLATE FAULTY MOSFETs
- K ISOLATE FAULTY MULTIVIBRATOR CIRCUITS
- K ISOLATE FAULTY OPERATIONAL AMPLIFIERS
- K ISOLATE FAULTY OSCILLATOR CIRCUITS
- K ISOLATE FAULTY PHOTSENSITIVE DEVICES
- K ISOLATE FAULTY POWER SUPPLIES
- K ISOLATE FAULTY POWER SUPPLY FILTERS
- K ISOLATE FAULTY POWER SUPPLY RECTIFIERS
- K ISOLATE FAULTY RCL CIRCUITS
- K ISOLATE FAULTY REGISTER LOGIC CIRCUITS
- K ISOLATE FAULTY RELAYS
- K ISOLATE FAULTY RESISTORS
- K ISOLATE FAULTY SCR<sub>s</sub>
- K ISOLATE FAULTY SOLID STATE DIODES
- K ISOLATE FAULTY SPEAKERS
- K ISOLATE FAULTY THREE-PHASE TRANSFORMERS
- K ISOLATE FAULTY TRANSFORMERS

## KNOWLEDGE :

- K ISOLATE FAULTY TRANSISTOR AMPLIFIER CIRCUITS
- K ISOLATE FAULTY TRANSISTOR AMPLIFIER COUPLING CIRCUITS
- K ISOLATE FAULTY TRANSISTOR AMPLIFIER STABILIZATION CIRCUIT THEORY OF OPERATION
- K ISOLATE FAULTY TRANSMISSION LINES
- K ISOLATE FAULTY TTLs
- K ISOLATE FAULTY VOLTAGE REGULATORS
- K ISOLATE FAULTY WAVESHAPING CIRCUITS
- K ISOLATE FAULTY WEIGHTED RESISTOR D/A CONVERTERS
- K ISOLATE FAULTY ZENER DIODES
- K ISOLATE MALFUNCTIONS IN TEST STATION THROUGH INTERCONNECTS OF AN INSTALLED LRU (TASK NUMBER: 61370)
- K PERFORM AC CIRCUIT CALCULATIONS
- K PERFORM BINARY CONVERSIONS
- K PERFORM BINARY MATH OPERATION
- K PERFORM DC CIRCUIT CALCULATIONS
- K PERFORM OCTAL MATH OPERATION
- K PERFORM TRANSFORMER CALCULATIONS
- K PERFORM TRANSMISSION LINE CALCULATIONS
- K PERFORM TRANSMISSION LINE MEASUREMENTS
- K PERFORM TRANSMISSION POWER CALCULATIONS
- K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)
- K SIMPLIFY EXPRESSIONS BY USING BOOLEAN ALGEBRA
- K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)
- K TROUBLESHOOT AC CIRCUITS
- K TROUBLESHOOT AC MOTORS
- K TROUBLESHOOT BIPOLAR JUNCTION TRANSISTORS
- K TROUBLESHOOT CHOPPERS (SYNCHROUS VIBRATORS)
- K TROUBLESHOOT CLAMPER CIRCUITS
- K TROUBLESHOOT CMOS LOGIC FAMILIES
- K TROUBLESHOOT COMPUTER MEMORIES
- K TROUBLESHOOT DC CIRCUITS
- K TROUBLESHOOT FLIP-FLOPS
- K TROUBLESHOOT FREQUENCY SENSITIVE FILTERS
- K TROUBLESHOOT INDUCTORS
- K TROUBLESHOOT LIMITER CIRCUIT DIODES
- K TROUBLESHOOT LIMITER CIRCUIT TRANSISTORS
- K TROUBLESHOOT LIMITER CIRCUIT ZENER DIODES
- K TROUBLESHOOT LOGIC COUNTERS
- K TROUBLESHOOT LOGIC REGISTERS
- K TROUBLESHOOT MAIN LOGIC GATES
- K TROUBLESHOOT OPERATIONAL AMPLIFIERS
- K TROUBLESHOOT PHOTSENSITIVE DEVICES
- K TROUBLESHOOT POWER SUPPLY CIRCUITS
- K TROUBLESHOOT POWER SUPPLY FILTERS
- K TROUBLESHOOT POWER SUPPLY RECTIFIERS
- K TROUBLESHOOT RCL CIRCUITS
- K TROUBLESHOOT RELAYS
- K TROUBLESHOOT SPEAKERS
- K TROUBLESHOOT THREE-PHASE TRANSFORMERS
- K TROUBLESHOOT TRANSFORMERS
- K TROUBLESHOOT TRANSISTOR AMPLIFIER CIRCUITS

**KNOWLEDGE:**

K TROUBLESHOOT TRANSISTOR AMPLIFIER COUPLING CIRCUITS  
 K TROUBLESHOOT TRANSISTOR AMPLIFIER STABILIZATION CIRCUITS  
 K TROUBLESHOOT TTL LOGIC FAMILIES  
 K TROUBLESHOOT VOLTAGE REGULATOR  
 K TROUBLESHOOT WAVE GENERATING CIRCUIT MULTIVIBRATORS  
 K TROUBLESHOOT WAVE GENERATING CIRCUIT OSCILLATORS  
 K TROUBLESHOOT WAVESHAPING CIRCUITS  
 K TROUBLESHOOT WEIGHTED RESISTOR D/A CONVERTERS  
 K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
 K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | X1234         |            | 0          | 0          | 1        | 7        | 5.95       |     |
| 451X6B | X1234         |            | 0          | 11         | 15       | 7        | 5.95       |     |
| 451X6  | X1234         |            | 0          | 5          | 8        | 7        | 5.95       |     |
| 451X6A | X1235         |            | 0          | 0          | 1        | 9        | 7.44       |     |
| 451X6B | X1235         |            | 4          | 14         | 19       | 9        | 7.44       |     |
| 451X6  | X1235         |            | 2          | 7          | 10       | 9        | 7.44       |     |
| 451X6A | X1236         |            | 0          | 0          | 1        | 8        | 6.40       |     |
| 451X6B | X1236         |            | 4          | 13         | 18       | 8        | 6.40       |     |
| 451X6  | X1236         |            | 2          | 6          | 9        | 8        | 6.40       |     |
| 451X6A | X1237         |            | 0          | 0          | 1        | 8        | 7.05       |     |
| 451X6B | X1237         |            | 4          | 13         | 18       | 8        | 7.05       |     |
| 451X6  | X1237         |            | 2          | 6          | 9        | 8        | 7.05       |     |
| 451X6A | X1238         |            | 0          | 0          | 1        | 8        | 5.55       |     |
| 451X6B | X1238         |            | 4          | 11         | 16       | 8        | 5.55       |     |
| 451X6  | X1238         |            | 2          | 5          | 8        | 8        | 5.55       |     |
| 451X6A | X1239         |            | 0          | 0          | 1        | 8        | 5.54       |     |
| 451X6B | X1239         |            | 4          | 14         | 17       | 8        | 5.54       |     |
| 451X6  | X1239         |            | 2          | 7          | 9        | 8        | 5.54       |     |
| 451X6A | X1240         |            | 0          | 0          | 1        | 9        | 5.75       |     |
| 451X6B | X1240         |            | 4          | 13         | 16       | 9        | 5.75       |     |
| 451X6  | X1240         |            | 2          | 6          | 8        | 9        | 5.75       |     |
| 451X6A | X1241         |            | 0          | 0          | 0        | 8        | 5.62       |     |
| 451X6B | X1241         |            | 4          | 13         | 16       | 8        | 5.62       |     |
| 451X6  | X1241         |            | 2          | 6          | 8        | 8        | 5.62       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | X1242         |            | 0          | 0          | 1        | 8        | 5.49       |     |
| 451X6B | X1242         |            | 8          | 15         | 17       | 8        | 5.49       |     |
| 451X6  | X1242         |            | 3          | 7          | 9        | 8        | 5.49       |     |
| 451X6A | X1243         |            | 0          | 0          | 0        | 8        | 5.79       |     |
| 451X6B | X1243         |            | 8          | 14         | 16       | 8        | 5.79       |     |
| 451X6  | X1243         |            | 3          | 7          | 8        | 8        | 5.79       |     |
| 451X6A | X1244         |            | 0          | 0          | 0        | 8        | 6.10       |     |
| 451X6B | X1244         |            | 4          | 13         | 17       | 8        | 6.10       |     |
| 451X6  | X1244         |            | 2          | 6          | 9        | 8        | 6.10       |     |
| 451X6A | X1245         |            | 0          | 0          | 0        | 8        | 6.45       |     |
| 451X6B | X1245         |            | 4          | 14         | 17       | 8        | 6.45       |     |
| 451X6  | X1245         |            | 2          | 7          | 8        | 8        | 6.45       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
X1234 ISOLATE MALFUNCTIONS IN CRS TEST STATION LOCAL OSCILLATORS  
X1235 ISOLATE MALFUNCTIONS IN CRS TEST STATION RF GENERATORS  
X1236 ISOLATE MALFUNCTIONS IN CRS TEST STATION RF TEST BAYS  
X1237 ISOLATE MALFUNCTIONS IN CRS TEST STATION SWITCHINGS  
X1238 ISOLATE MALFUNCTIONS IN CRS TEST STATION TAPE READERS  
X1239 ISOLATE MALFUNCTIONS IN DPTS CI CALIBRATION BOXES  
X1240 ISOLATE MALFUNCTIONS IN DPTS CORE MEMORIES  
X1241 ISOLATE MALFUNCTIONS IN DPTS DOGHOUSE ASSEMBLIES  
X1242 ISOLATE MALFUNCTIONS IN DPTS DP CALIBRATION BOXES  
X1243 ISOLATE MALFUNCTIONS IN DPTS DP/CI INTERFACE ASSEMBLIES  
X1244 ISOLATE MALFUNCTIONS IN DPTS PANEL CONTROL ASSEMBLIES  
X1245 ISOLATE MALFUNCTIONS IN DPTS WIRING HARNESS ASSEMBLIES

**TASK NUMBER: 60810**

**TASK STATEMENT:**

REPAIR THE AN/ALR-62 TEST STATION

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES  
CTK  
DIGITAL MULTIMETER  
FREQUENCY METER  
OSCILLOSCOPE  
RF POWER METER  
SOLDERING STATION

**REFERENCES:**

APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
APPLICABLE IPB

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN SRUs  
A CLEAN CONTACTS (F 210)  
A CLEAN TAPE READER  
A ORDER PARTS  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)  
A REMOVE AND REPLACE TRUs (TASK NUMBER: 61380)  
A REPAIR WIRING (TASK NUMBER: 61440)  
A RESEAT SRUs  
A TUNE OR ADJUST MICROWAVE OSCILLATORS OR AMPLIFIERS

**SKILLS:**

S CONNECT CABLES  
S OPERATE TEST STATION

**SKILLS:**

S PERFORM VISUAL INSPECTIONS  
 S SOLDER OR DESOLDER PC BOARDS  
 S USE COMMON HANDTOOLS  
 S USE DIGITAL MULTIMETER TO MEASURE RESISTANCE AND VOLTAGE  
 S USE FREQUENCY METER TO MAKE RF FREQUENCY ADJUSTMENTS  
 S USE OSCILLOSCOPE TO MEASURE FREQUENCY, PULSE WIDTH, AND VOLTAGE  
 S USE RF POWER METER TO CHECK POWER MEASUREMENT

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY TECHNICAL DATA  
 K PERFORM CAPACITOR CALCULATIONS

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | X1206         |            | 0          | 0          | 1        | 9        | 6.05       |     |
| 451X6B | X1206         |            | 4          | 14         | 17       | 9        | 6.05       |     |
| 451X6  | X1206         |            | 2          | 7          | 8        | 9        | 6.05       |     |
| 451X6A | X1207         |            | 0          | 0          | 1        | 11       | 7.15       |     |
| 451X6B | X1207         |            | 8          | 16         | 20       | 11       | 7.15       |     |
| 451X6  | X1207         |            | 3          | 8          | 10       | 11       | 7.15       |     |
| 451X6A | X1208         |            | 0          | 0          | 1        | 10       | 6.56       |     |
| 451X6B | X1208         |            | 0          | 9          | 14       | 10       | 6.56       |     |
| 451X6  | X1208         |            | 0          | 5          | 7        | 10       | 6.56       |     |
| 451X6A | X1209         |            | 0          | 0          | 1        | 10       | 5.41       |     |
| 451X6B | X1209         |            | 8          | 13         | 17       | 10       | 5.41       |     |
| 451X6  | X1209         |            | 3          | 6          | 8        | 10       | 5.41       |     |
| 451X6A | X1210         |            | 0          | 0          | 1        | 10       | 6.55       |     |
| 451X6B | X1210         |            | 8          | 15         | 20       | 10       | 6.55       |     |
| 451X6  | X1210         |            | 3          | 7          | 10       | 10       | 6.55       |     |
| 451X6A | X1211         |            | 0          | 0          | 1        | 10       | 5.71       |     |
| 451X6B | X1211         |            | 4          | 13         | 18       | 10       | 5.71       |     |
| 451X6  | X1211         |            | 2          | 6          | 9        | 10       | 5.71       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

**F 210 CLEAN CONTACTS**

**X1206 ALIGN COUNTERMEASURES RECEIVER SET (CRS) TEST STATION RF  
TEST BAY CONTROL/INTERFACE ASSEMBLIES**

**X1207 ALIGN CRS TEST STATION RADIO FREQUENCY (RF) GENERATORS**

**X1208 ALIGN CRS TEST STATION SWITCHING VIDEO ATTENUATORS**

**X1209 ALIGN CRS TEST STATION TAPE READERS**

**X1210 ALIGN DIGITAL PROCESSOR TEST STATION (DPTS) CIRCUIT CARD  
ASSEMBLIES**

**X1211 ALIGN DPTS TAPE READER UNITS**

**TASK NUMBER: 60820**

**TASK STATEMENT:**

PERFORM OPERATIONAL TESTS OF THE PEN AIDS TEST STATION

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

SUSPECTED MALFUNCTION; TEST STATION VERIFICATION; AFTER REPAIR;  
FUNCTIONAL CHECK

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CALL UP TAPE  
A EXECUTE TEST

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S OPERATE TEST STATION

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | X1272         |            | 0          | 0          | 0        | 7        | 5.42       |     |
| 451X6B | X1272         |            | 4          | 12         | 9        | 7        | 5.42       |     |
| 451X6  | X1272         |            | 2          | 6          | 4        | 7        | 5.42       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | X1273         |            | 0          | 0          | 0        | 7        | 5.16       |     |
| 451X6B | X1273         |            | 0          | 8          | 8        | 7        | 5.16       |     |
| 451X6  | X1273         |            | 0          | 4          | 4        | 7        | 5.16       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

X1272 PERFORM OPERATIONAL TESTS OF PEN AIDS TEST STATION  
BUFFER/ADAPTERS

X1273 PERFORM OPERATIONAL TESTS OF PEN AIDS TEST STATION HIGH  
VOLTAGE/INTERMEDIATE VOLTAGE DIVIDERS

**TASK NUMBER:** 60830

**TASK STATEMENT:**

PERFORM PEN AIDS TEST STATION MAINTENANCE TESTS (X1274)

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
FREQUENCY COUNTER  
HIGH VOLTAGE PROBE

**REFERENCES:**

33D7-44-121-2  
33D7-44-121-8-1  
35-1-181-1

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CALL UP TAPE  
A EXECUTE TEST

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S OPERATE TEST STATION  
S USE COMMON HANDTOOLS  
S USE FREQUENCY COUNTER  
S USE HIGH VOLTAGE PROBE

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K DETERMINE WHICH PART OF MAINTENANCE TEST TO EXECUTE

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 244         |            | 47         | 66         | 72       | 38       | 5.10       |     |
| 451X6B | F 244         |            | 42         | 48         | 54       | 38       | 5.10       |     |
| 451X6  | F 244         |            | 45         | 56         | 64       | 38       | 5.10       |     |
| 451X6A | X1274         |            | 0          | 0          | 0        | 7        | 6.06       |     |
| 451X6B | X1274         |            | 8          | 12         | 8        | 7        | 6.06       |     |
| 451X6  | X1274         |            | 3          | 6          | 4        | 7        | 6.06       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 244 PERFORM MAINTENANCE TAPE TESTS OF TEST STATIONS  
X1274 PERFORM PEN AIDS TEST STATION MAINTENANCE TESTS

**TASK NUMBER: 60840**

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN THE PEN AIDS TEST STATION

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
DIGITAL MULTIMETER  
ESD PROTECTIVE EQUIPMENT  
FREQUENCY COUNTER  
HIGH VOLTAGE PROBE  
OSCILLOSCOPE  
RF POWER METER  
SOLDERING STATION  
SPECTRUM ANALYZER

**REFERENCES:**

APPLICABLE SHOP SYSTEMS TO  
33D7-44-121-2  
33D7-44-121-8-1  
35-1-181-1

**CONDITIONS:**

2 PERSON REQUIREMENT; AIR CONDITIONED ENVIRONMENT

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

- A MEASURE TRANSMISSION POWER
- A PERFORM OPERATIONAL TEST OF PEN AIDS TEST STATION (TASK NUMBER: 60820)
- A PERFORM PEN AIDS TEST STATION MAINTENANCE TESTS (TASK NUMBER: 60830)

**SKILLS:**

- S CONNECT ADAPTER AND CABLES
- S OPERATE TEST STATION
- S PERFORM VISUAL INSPECTIONS

## SKILLS:

- S SOLDER OR DESOLDER TERMINAL CONNECTIONS
- S USE COMMON HANDTOOLS
- S USE DIGITAL MULTIMETER TO MEASURE CONTINUITY, RESISTANCE, AND VOLTAGE
- S USE FREQUENCY COUNTER TO MEASURE RF
- S USE HIGH VOLTAGE PROBE TO CHECK RF GENERATORS
- S USE OSCILLOSCOPE TO EVALUATE WAVEFORMS
- S USE RF POWER METER TO MEASURE POWER
- S USE SPECTRUM ANALYZER TO ANALYZE RF

## KNOWLEDGE:

- K ANNOTATE FORMS
- K APPLY AC CIRCUIT THEORY OF OPERATION
- K APPLY APPROXIMATION A/D CONVERTER THEORY OF OPERATION
- K APPLY BIPOLAR JUNCTION TRANSISTOR THEORY OF OPERATION
- K APPLY CAPACITOR THEORY OF OPERATION
- K APPLY CHOPPER (SYNCHROUS VIBRATOR) THEORY OF OPERATION
- K APPLY CLAMPER CIRCUIT THEORY OF OPERATION
- K APPLY DC CIRCUIT THEORY OF OPERATION
- K APPLY DISPLAY TUBE THEORY OF OPERATION
- K APPLY ELECTRON TUBE AMPLIFIER THEORY OF OPERATION
- K APPLY ESD PRECAUTIONS
- K APPLY FREQUENCY SENSITIVE FILTER THEORY OF OPERATION
- K APPLY INDUCTOR THEORY OF OPERATION
- K APPLY INTEGRATED CIRCUIT THEORY OF OPERATION
- K APPLY JFET THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT ZENER DIODE THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT COUNTER THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT REGISTER THEORY OF OPERATION
- K APPLY MAIN LOGIC GATE THEORY OF OPERATION
- K APPLY METER MOVEMENT THEORY OF OPERATION
- K APPLY MICROWAVE OSCILLATOR OR AMPLIFIER THEORY OF OPERATION
- K APPLY MOSFET THEORY OF OPERATION
- K APPLY MULTIVIBRATOR CIRCUIT THEORY OF OPERATION
- K APPLY OPERATIONAL AMPLIFIER THEORY OF OPERATION
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY OSCILLATOR CIRCUIT THEORY OF OPERATION
- K APPLY POWER SUPPLY FILTER THEORY OF OPERATION
- K APPLY PULSE MODULATION RECEIVER THEORY OF OPERATION
- K APPLY PULSE MODULATION TRANSMITTER THEORY OF OPERATION
- K APPLY RAMP A/D CONVERTER THEORY OF OPERATION
- K APPLY RCL CIRCUIT THEORY OF BASIC OPERATION
- K APPLY RCL CIRCUIT THEORY OF RESONANT OPERATION
- K APPLY RELAY THEORY OF OPERATION
- K APPLY RESISTOR THEORY OF OPERATION
- K APPLY SCR THEORY OF OPERATION
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY SOLID STATE DIODE THEORY OF OPERATION
- K APPLY TECHNICAL DATA
- K APPLY TRANSFORMER THEORY OF OPERATION

## KNOWLEDGE:

- K APPLY TRANSISTOR AMPLIFIER COUPLING CIRCUIT THEORY OF OPERATION
- K APPLY TRANSISTOR AMPLIFIER CIRCUIT THEORY OF OPERATION
- K APPLY TRANSISTOR AMPLIFIER STABILIZATION CIRCUIT THEORY OF OPERATION
- K APPLY TRANSMISSION LINE THEORY OF OPERATION
- K APPLY TTL THEORY OF OPERATION
- K APPLY UJT THEORY OF OPERATION
- K APPLY VOLTAGE REGULATOR THEORY OF OPERATION
- K APPLY WAVESHAPING CIRCUIT THEORY OF OPERATION
- K APPLY WEIGHTED RESISTOR D/A CONVERTER THEORY OF OPERATION
- K APPLY ZENER DIODE THEORY OF OPERATION
- K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING
- K DETERMINE WHETHER MALFUNCTION IS IN TEST STATION, LRU, OR ADAPTER (TASK NUMBER: 61360)
- K ISOLATE FAULTY APPROXIMATION A/D CONVERTERS
- K ISOLATE FAULTY BIPOLAR JUNCTION TRANSISTORS
- K ISOLATE FAULTY CAPACITORS
- K ISOLATE FAULTY CHOPPERS (SYNCHRONOUS VIBRATORS)
- K ISOLATE FAULTY CLAMPER CIRCUITS
- K ISOLATE FAULTY ELECTRON TUBE AMPLIFIERS
- K ISOLATE FAULTY FREQUENCY SENSITIVE FILTERS
- K ISOLATE FAULTY INDUCTORS
- K ISOLATE FAULTY INTEGRATED CIRCUITS
- K ISOLATE FAULTY JFETs
- K ISOLATE FAULTY LIMITER CIRCUIT DIODES
- K ISOLATE FAULTY LIMITER CIRCUIT ZENER DIODES
- K ISOLATE FAULTY LIMITER TRANSISTOR CIRCUITS
- K ISOLATE FAULTY LOGIC COUNTERS
- K ISOLATE FAULTY MAIN LOGIC GATES
- K ISOLATE FAULTY METER MOVEMENTS
- K ISOLATE FAULTY MICROWAVE OSCILLATORS OR AMPLIFIERS
- K ISOLATE FAULTY MOSFETs
- K ISOLATE FAULTY MULTIVIBRATOR CIRCUITS
- K ISOLATE FAULTY OPERATIONAL AMPLIFIERS
- K ISOLATE FAULTY OSCILLATOR CIRCUITS
- K ISOLATE FAULTY POWER SUPPLY FILTERS
- K ISOLATE FAULTY PULSE MODULATION RECEIVERS
- K ISOLATE FAULTY PULSE MODULATION TRANSMITTERS
- K ISOLATE FAULTY RAMP A/D CONVERTERS
- K ISOLATE FAULTY RCL CIRCUITS
- K ISOLATE FAULTY REGISTER LOGIC CIRCUITS
- K ISOLATE FAULTY RELAYS
- K ISOLATE FAULTY RESISTORS
- K ISOLATE FAULTY SCRs
- K ISOLATE FAULTY SOLID STATE DIODES
- K ISOLATE FAULTY TRANSFORMERS
- K ISOLATE FAULTY TRANSISTOR AMPLIFIER CIRCUITS
- K ISOLATE FAULTY TRANSISTOR AMPLIFIER COUPLING CIRCUITS
- K ISOLATE FAULTY TRANSISTOR AMPLIFIER STABILIZATION CIRCUITS
- K ISOLATE FAULTY TRANSMISSION LINES
- K ISOLATE FAULTY TTLS
- K ISOLATE FAULTY UJT

**KNOWLEDGE:**

K ISOLATE FAULTY VOLTAGE REGULATORS  
 K ISOLATE FAULTY WAVESHAPING CIRCUITS  
 K ISOLATE FAULTY WEIGHTED RESISTOR D/A CONVERTERS  
 K ISOLATE FAULTY ZENER DIODES  
 K ISOLATE MALFUNCTIONS IN TEST STATION THROUGH INTERCONNECTS OF  
 AN INSTALLED LRU (TASK NUMBER: 61370)  
 K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION  
 PROCEDURES (F 278)  
 K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
 K TROUBLESHOOT DC CIRCUITS  
 K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
 K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | X1246         |            | 0          | 0          | 0        | 7        | 6.31       |     |
| 451X6B | X1246         |            | 8          | 13         | 8        | 7        | 6.31       |     |
| 451X6  | X1246         |            | 3          | 6          | 4        | 7        | 6.31       |     |
| 451X6A | X1247         |            | 0          | 0          | 0        | 7        | 5.89       |     |
| 451X6B | X1247         |            | 0          | 12         | 8        | 7        | 5.89       |     |
| 451X6  | X1247         |            | 0          | 6          | 4        | 7        | 5.89       |     |
| 451X6A | X1248         |            | 0          | 0          | 0        | 7        | 7.56       |     |
| 451X6B | X1248         |            | 4          | 12         | 9        | 7        | 7.56       |     |
| 451X6  | X1248         |            | 2          | 6          | 4        | 7        | 7.56       |     |
| 451X6A | X1249         |            | 0          | 0          | 0        | 7        | 7.65       |     |
| 451X6B | X1249         |            | 4          | 11         | 9        | 7        | 7.65       |     |
| 451X6  | X1249         |            | 2          | 5          | 4        | 7        | 7.65       |     |
| 451X6A | X1250         |            | 0          | 0          | 0        | 7        | 6.94       |     |
| 451X6B | X1250         |            | 4          | 9          | 7        | 7        | 6.94       |     |
| 451X6  | X1250         |            | 2          | 5          | 4        | 7        | 6.94       |     |
| 451X6A | X1251         |            | 0          | 0          | 0        | 7        | 7.05       |     |
| 451X6B | X1251         |            | 8          | 13         | 9        | 7        | 7.05       |     |
| 451X6  | X1251         |            | 3          | 6          | 4        | 7        | 7.05       |     |
| 451X6A | X1252         |            | 0          | 0          | 0        | 7        | 7.36       |     |
| 451X6B | X1252         |            | 8          | 11         | 8        | 7        | 7.36       |     |
| 451X6  | X1252         |            | 3          | 5          | 4        | 7        | 7.36       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
X1246 ISOLATE MALFUNCTIONS IN PEN AIDS TEST STATION  
BUFFER/ADAPTERS  
X1247 ISOLATE MALFUNCTIONS IN PEN AIDS TEST STATION HIGH  
VOLTAGE/INTERMEDIATE VOLTAGE DIVIDERS  
X1248 ISOLATE MALFUNCTIONS IN PEN AIDS TEST STATION RF EVALUATION  
UNITS  
X1249 ISOLATE MALFUNCTIONS IN PEN AIDS TEST STATION RF GENERATORS  
X1250 ISOLATE MALFUNCTIONS IN PEN AIDS TEST STATION RMSs  
X1251 ISOLATE MALFUNCTIONS IN PEN AIDS TEST STATION SWITCHING  
UNITS  
X1252 ISOLATE MALFUNCTIONS IN PEN AIDS TEST STATION VIDEO  
EVALUATION UNITS

**TASK NUMBER: 60850**

**TASK STATEMENT:**

REPAIR THE PEN AIDS TEST STATION

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES  
CTK  
DIGITAL MULTIMETER  
ESD PROTECTIVE EQUIPMENT  
FREQUENCY COUNTER  
HEAT SINK COMPOUND  
HIGH VOLTAGE PROBE  
RF POWER METER

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
APPLICABLE IPB

**CONDITIONS:**

2 PERSON REQUIREMENT

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN SRUs  
A CLEAN CONTACTS (F 210)  
A ORDER PARTS  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)  
A REMOVE AND REPLACE TRUs (TASK NUMBER: 61380)  
A REPAIR WIRING (TASK NUMBER: 61440)  
A RESEAT SRUs  
A TUNE OR ADJUST MICROWAVE OSCILLATORS OR AMPLIFIERS

**SKILLS:**

S APPLY HEAT SINK COMPOUND TO INSURE GOOD HEAT TRANSFER  
 S CONNECT ADAPTER AND CABLES  
 S OPERATE TEST STATION  
 S USE COMMON HANDTOOLS  
 S USE DIGITAL MULTIMETER TO MEASURE VOLTAGE  
 S USE FREQUENCY COUNTER TO ALIGN RF  
 S USE HIGH VOLTAGE PROBE TO ALIGN RF GENERATORS  
 S USE RF POWER METER

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY ESD PRECAUTIONS  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | X1212         |            | 0          | 0          | 0        | 7        | 5.62       |     |
| 451X6B | X1212         |            | 0          | 7          | 7        | 7        | 5.62       |     |
| 451X6  | X1212         |            | 0          | 3          | 3        | 7        | 5.62       |     |
| 451X6A | X1213         |            | 0          | 0          | 0        | 7        | 6.27       |     |
| 451X6B | X1213         |            | 4          | 11         | 8        | 7        | 6.27       |     |
| 451X6  | X1213         |            | 2          | 5          | 4        | 7        | 6.27       |     |
| 451X6A | X1214         |            | 0          | 0          | 0        | 7        | 7.43       |     |
| 451X6B | X1214         |            | 8          | 12         | 8        | 7        | 7.43       |     |
| 451X6  | X1214         |            | 3          | 6          | 4        | 7        | 7.43       |     |
| 451X6A | X1215         |            | 0          | 0          | 0        | 7        | 7.59       |     |
| 451X6B | X1215         |            | 8          | 13         | 9        | 7        | 7.59       |     |
| 451X6  | X1215         |            | 3          | 6          | 4        | 7        | 7.59       |     |
| 451X6A | X1216         |            | 0          | 0          | 0        | 7        | 7.38       |     |
| 451X6B | X1216         |            | 4          | 11         | 8        | 7        | 7.38       |     |
| 451X6  | X1216         |            | 2          | 5          | 4        | 7        | 7.38       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS

X1212 ALIGN PENETRATION AIDS (PEN AIDS) TEST STATION HIGH  
VOLTAGE/INTERMEDIATE VOLTAGE DIVIDERS

X1213 ALIGN PEN AIDS TEST STATION RADAR MODULATION SIMULATORS

X1214 ALIGN PEN AIDS TEST STATION RF EVALUATION UNITS

X1215 ALIGN PEN AIDS TEST STATION RF GENERATORS

X1216 ALIGN PEN AIDS TEST STATION VIDEO EVALUATION UNITS

**TASK NUMBER:** 60860

**TASK STATEMENT:**

MAINTAIN PROM PROGRAMMERS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES  
CTK  
ESD PROTECTIVE EQUIPMENT  
MULTIMETER  
OSCILLOSCOPE

**REFERENCES:**

31S5-4-809-1

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

- A CLEAN CONTACTS (F 210)
- A PERFORM OPERATIONAL TEST OF PROM PROGRAMMERS (U 985)
- A ISOLATE MALFUNCTIONS IN PROM PROGRAMMERS TO SRU OR COMPONENT LEVEL (U 936)
- A ALIGN PROM PROGRAMMERS (U 898)
- A CLEAN TAPE READER
- A ORDER PARTS
- A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)
- A REMOVE AND REPLACE POWER SUPPLIES
- A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)
- A REPAIR WIRING (TASK NUMBER: 61440)
- A RESEAT SRUs

**SKILLS:**

- S PERFORM VISUAL INSPECTIONS
- S USE COMMON HANDTOOLS
- S USE MULTIMETER TO CHECK VOLTAGES AND RESISTANCE
- S USE OSCILLOSCOPE TO CHECK VOLTAGE AND SIGNALS

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY ESD PRECAUTIONS  
 K APPLY LED THEORY OF OPERATION  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY POWER SUPPLY THEORY OF OPERATION  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY TECHNICAL DATA  
 K APPLY THEORY OF OPERATION OF COMPUTER MEMORIES  
 K APPLY TRANSFORMER THEORY OF OPERATION  
 K ISOLATE FAULTY COMPUTER MEMORIES  
 K ISOLATE FAULTY LEDs  
 K ISOLATE FAULTY POWER SUPPLIES  
 K ISOLATE FAULTY TRANSFORMERS  
 K PERFORM BASIC DC CIRCUIT CALCULATIONS  
 K PERFORM BINARY CONVERSIONS  
 K PERFORM BINARY MATH OPERATION

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 248         |            | 0          | 0          | 3        | 16       | 4.81       |     |
| 451X6B | F 248         |            | 23         | 28         | 33       | 16       | 4.81       |     |
| 451X6  | F 248         |            | 9          | 14         | 17       | 16       | 4.81       |     |
| 451X6A | U 898         |            | 0          | 0          | 1        | 10       | 5.64       |     |
| 451X6B | U 898         |            | 4          | 18         | 21       | 10       | 5.64       |     |
| 451X6  | U 898         |            | 2          | 8          | 11       | 10       | 5.64       |     |
| 451X6A | U 936         |            | 0          | 0          | 0        | 10       | 6.07       |     |
| 451X6B | U 936         |            | 0          | 12         | 17       | 10       | 6.07       |     |
| 451X6  | U 936         |            | 0          | 6          | 8        | 10       | 6.07       |     |
| 451X6A | U 985         |            | 0          | 0          | 1        | 12       | 4.69       |     |
| 451X6B | U 985         |            | 8          | 20         | 25       | 12       | 4.69       |     |
| 451X6  | U 985         |            | 3          | 10         | 12       | 12       | 4.69       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
 F 248 PERFORM PROGRAMMABLE READ ONLY MEMORY (PROM) BURNER  
 OPERATIONAL TESTS  
 U 898 ALIGN PROGRAMMABLE READ ONLY MEMORY (PROM) PROGRAMMERS  
 U 936 ISOLATE MALFUNCTIONS IN PROM PROGRAMMERS TO SRU OR  
 COMPONENT LEVEL  
 U 985 PERFORM OPERATIONAL TESTS OF PROM PROGRAMMERS

**TASK NUMBER:** 60870

**TASK STATEMENT:**

MAINTAIN USM-427 ECM TEST SETS

**TASK NOTES:**

COMMONLY CALLED 'SQUIRT BOX'. PMEL RESPONSIBLE FOR MAJORITY OF TASK.

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

ALCOHOL  
CARD SETS  
CTK  
INTERFACE ADAPTER  
PROM ADAPTER  
PROM PROGRAMMER  
TAPE  
ULTRAVIOLET LIGHT

**REFERENCES:**

33D7-8-115

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CLEAN CARD PROM WINDOW  
A PERFORM BIT OF USM-427 ECM TEST SETS (U 949)  
A REPROGRAM  
A PERFORM CARD SET CALIBRATION

**SKILLS:**

S ERASE PROM  
S INDEX TAPE  
S INSTALL ADAPTERS  
S INSTALL CARD SETS  
S OPERATE PROM PROGRAMMER  
S USE COMMON HANDTOOLS  
S USE ULTRAVIOLET LIGHT

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K PROTECT PROM WINDOW FROM ULTRAVIOLET LIGHT

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | U 949         |            | 0          | 0          | 0        | 2        | 4.38       |     |
| 451X6B | U 949         |            | 0          | 2          | 4        | 2        | 4.38       |     |
| 451X6  | U 949         |            | 0          | 1          | 2        | 2        | 4.38       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

U 949 PERFORM BUILT-IN TESTS (BIT) OF USM-427 ECM TEST SETS

**TASK NUMBER: 60880**

**TASK STATEMENT:**

PERFORM OPERATIONAL TESTS OF LRUs THAT RUN ON THE PEN AIDS  
TEST STATION

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
DIGITAL MULTIMETER  
OSCILLOSCOPE  
TEST STATION

**REFERENCES:**

12P3-ALQ-94-1  
12P3-ALQ-94-2

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR; FUNCTIONAL CHECK; NEW ISSUE  
FROM SUPPLY

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CALL UP TAPE  
A EXECUTE TEST

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S CONNECT LRU TO TEST STATION  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S USE DIGITAL MULTIMETER TO MEASURE RESISTANCE  
S USE OSCILLOSCOPE TO EVALUATE WAVEFORMS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 243         |            | 61         | 62         | 65       | 39       | 4.32       |     |
| 451X6B | F 243         |            | 50         | 60         | 59       | 39       | 4.32       |     |
| 451X6  | F 243         |            | 55         | 60         | 62       | 39       | 4.32       |     |
| 451X6A | X1253         |            | 0          | 0          | 0        | 7        | 5.04       |     |
| 451X6B | X1253         |            | 8          | 15         | 10       | 7        | 5.04       |     |
| 451X6  | X1253         |            | 3          | 7          | 5        | 7        | 5.04       |     |
| 451X6A | X1254         |            | 0          | 0          | 0        | 7        | 5.98       |     |
| 451X6B | X1254         |            | 12         | 16         | 11       | 7        | 5.98       |     |
| 451X6  | X1254         |            | 5          | 8          | 5        | 7        | 5.98       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 243 PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECTION (T AND I)  
OF LRUs ISSUED FROM SUPPLY  
X1253 PERFORM OPERATIONAL TESTS OF AN/ALQ-94 LBPA's  
X1254 PERFORM OPERATIONAL TESTS OF AN/ALQ-94 LBR's

**TASK NUMBER:** 60890

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN LRUs THAT RUN ON THE PEN AIDS TEST STATION

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
ESD PROTECTIVE EQUIPMENT  
OSCILLOSCOPE  
RF POWER METER  
TEST STATION

**REFERENCES:**

APPLICABLE SHOP SYSTEMS TO  
APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
APPLICABLE IPB

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S INSTALL EXTENDER BOARDS  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S USE OSCILLOSCOPE TO MEASURE VOLTAGE AND EVALUATE WAVEFORMS  
S USE RF POWER METER TO MEASURE POWER

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY AC CIRCUIT THEORY OF OPERATION  
K APPLY AM MODULATION TRANSMITTER THEORY OF OPERATION  
K APPLY AM RECEIVER THEORY OF OPERATION  
K APPLY BIPOLAR JUNCTION TRANSISTOR THEORY OF OPERATION

## KNOWLEDGE:

K APPLY CAPACITOR THEORY OF OPERATION  
K APPLY DC CIRCUIT THEORY OF OPERATION  
K APPLY ELECTRON TUBE AMPLIFIER THEORY OF OPERATION  
K APPLY ELECTRON TUBE THEORY OF OPERATION  
K APPLY ESD PRECAUTIONS  
K APPLY FLIP-FLOP THEORY OF OPERATION  
K APPLY INTEGRATED CIRCUIT THEORY OF OPERATION  
K APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATION  
K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION  
K APPLY LIMITER CIRCUIT ZENER DIODE THEORY OF OPERATION  
K APPLY LRU THEORY OF OPERATION  
K APPLY MAIN LOGIC GATE THEORY OF OPERATION  
K APPLY MULTIVIBRATOR CIRCUIT THEORY OF OPERATION  
K APPLY OPERATIONAL AMPLIFIER THEORY OF OPERATION  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY OSCILLATOR CIRCUIT THEORY OF OPERATION  
K APPLY POWER SUPPLY FILTER THEORY OF OPERATION  
K APPLY POWER SUPPLY RECTIFIER THEORY OF OPERATION  
K APPLY POWER SUPPLY THEORY OF OPERATION  
K APPLY PULSE MODULATION RECEIVER THEORY OF OPERATION  
K APPLY PULSE MODULATION TRANSMITTER THEORY OF OPERATION  
K APPLY RELAY THEORY OF OPERATION  
K APPLY RESISTOR THEORY OF OPERATION  
K APPLY SCR THEORY OF OPERATION  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY SOLENOID THEORY OF OPERATION  
K APPLY SOLID STATE DIODE THEORY OF OPERATION  
K APPLY TECHNICAL DATA  
K APPLY TRANSISTOR AMPLIFIER CIRCUIT THEORY OF OPERATION  
K APPLY TRANSMISSION LINE THEORY OF OPERATION  
K APPLY TTL THEORY OF OPERATION  
K APPLY VOLTAGE REGULATOR THEORY OF OPERATION  
K APPLY WAVESHAPING CIRCUIT THEORY OF OPERATION  
K APPLY ZENER DIODE THEORY OF OPERATION  
K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING  
K DETERMINE WHETHER MALFUNCTION IS IN TEST STATION, LRU, OR  
ADAPTER (TASK NUMBER: 61360)  
K ISOLATE FAULTY AC CIRCUITS  
K ISOLATE FAULTY AM RECEIVERS  
K ISOLATE FAULTY AM TRANSMITTERS  
K ISOLATE FAULTY BIPOLAR JUNCTION TRANSISTORS  
K ISOLATE FAULTY CAPACITORS  
K ISOLATE FAULTY DC CIRCUITS  
K ISOLATE FAULTY ELECTRON TUBE AMPLIFIERS  
K ISOLATE FAULTY ELECTRON TUBES  
K ISOLATE FAULTY FLIP-FLOPS  
K ISOLATE FAULTY INTEGRATED CIRCUITS  
K ISOLATE FAULTY LIMITER CIRCUIT DIODES  
K ISOLATE FAULTY LIMITER CIRCUIT ZENER DIODES  
K ISOLATE FAULTY LIMITER TRANSISTOR CIRCUITS  
K ISOLATE FAULTY MAIN LOGIC GATES  
K ISOLATE FAULTY MULTIVIBRATOR CIRCUITS  
K ISOLATE FAULTY OPERATIONAL AMPLIFIERS

**KNOWLEDGE:**

K ISOLATE FAULTY OSCILLATOR CIRCUITS  
K ISOLATE FAULTY POWER SUPPLIES  
K ISOLATE FAULTY POWER SUPPLY FILTERS  
K ISOLATE FAULTY POWER SUPPLY RECTIFIERS  
K ISOLATE FAULTY PULSE MODULATION RECEIVERS  
K ISOLATE FAULTY PULSE MODULATION TRANSMITTERS  
K ISOLATE FAULTY RELAYS  
K ISOLATE FAULTY RESISTORS  
K ISOLATE FAULTY SCRs  
K ISOLATE FAULTY SOLENOIDS  
K ISOLATE FAULTY SOLID STATE DIODES  
K ISOLATE FAULTY TRANSISTOR AMPLIFIER CIRCUITS  
K ISOLATE FAULTY TRANSMISSION LINES  
K ISOLATE FAULTY TTLs  
K ISOLATE FAULTY VOLTAGE REGULATORS  
K ISOLATE FAULTY WAVESHAPING CIRCUITS  
K ISOLATE FAULTY ZENER DIODES  
K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION  
PROCEDURES (F 278)  
K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | X1217         |            | 0          | 0          | 0        | 8        | 6.49       |     |
| 451X6B | X1217         |            | 8          | 15         | 10       | 8        | 6.49       |     |
| 451X6  | X1217         |            | 3          | 7          | 5        | 8        | 6.49       |     |
| 451X6A | X1218         |            | 0          | 0          | 0        | 8        | 7.01       |     |
| 451X6B | X1218         |            | 8          | 15         | 10       | 8        | 7.01       |     |
| 451X6  | X1218         |            | 3          | 7          | 5        | 8        | 7.01       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
X1217 ISOLATE MALFUNCTIONS IN AN/ALQ-94 LBPA's  
X1218 ISOLATE MALFUNCTIONS IN AN/ALQ-94 LBR's

**TASK NUMBER: 60900**

**TASK STATEMENT:**

REPAIR LRUs THAT RUN ON THE PEN AIDS TEST STATION

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES  
CTK  
ESD PROTECTIVE EQUIPMENT

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
APPLICABLE IPB

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

- A ALIGN SRUs
- A CLEAN CONTACTS (F 210)
- A ORDER PARTS
- A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)
- A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)
- A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)
- A REPAIR WIRING (TASK NUMBER: 61440)
- A RESEAT SRUs

**SKILLS:**

- S PERFORM VISUAL INSPECTIONS
- S USE COMMON HANDTOOLS

**KNOWLEDGE:**

- K ANNOTATE FORMS
- K APPLY ESD PRECAUTIONS
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY TECHNICAL DATA

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | X1196         |            | 0          | 0          | 0        | 7        | 5.83       |     |
| 451X6B | X1196         |            | 8          | 14         | 9        | 7        | 5.83       |     |
| 451X6  | X1196         |            | 3          | 7          | 5        | 7        | 5.83       |     |
| 451X6A | X1197         |            | 0          | 0          | 0        | 7        | 6.69       |     |
| 451X6B | X1197         |            | 12         | 15         | 9        | 7        | 6.69       |     |
| 451X6  | X1197         |            | 5          | 7          | 5        | 7        | 6.69       |     |
| 451X6A | X1275         |            | 0          | 0          | 0        | 8        | 4.56       |     |
| 451X6B | X1275         |            | 4          | 14         | 10       | 8        | 4.56       |     |
| 451X6  | X1275         |            | 2          | 7          | 5        | 8        | 4.56       |     |
| 451X6A | X1276         |            | 0          | 0          | 0        | 8        | 4.75       |     |
| 451X6B | X1276         |            | 8          | 15         | 10       | 8        | 4.75       |     |
| 451X6  | X1276         |            | 3          | 7          | 5        | 8        | 4.75       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
LINE REPLACEABLE UNITS (LRU)  
X1196 ALIGN AN/ALQ-94 LOW BAND POWER AMPLIFIERS (LBPA)  
X1197 ALIGN AN/ALQ-94 LOW BAND RECEIVERS (LBR)  
X1275 REMOVE OR REPLACE AN/ALQ-94 LBPA COMPONENTS  
X1276 REMOVE OR REPLACE AN/ALQ-94 LBR COMPONENTS

**TASK NUMBER:** 60910

**TASK STATEMENT:** .

PERFORM OPERATIONAL TESTS ON LRUs THAT RUN ON THE CRS TEST STATION

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
TEST STATION

**REFERENCES:**

APPLICABLE LRU TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
APPLICABLE TEST STATION TO

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR; FUNCTIONAL CHECK

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CALL UP TAPE  
A EXECUTE TEST

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S CONNECT LRU TO TEST STATION  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 243         |            | 61         | 62         | 65       | 39       | 4.32       |     |
| 451X6B | F 243         |            | 50         | 60         | 59       | 39       | 4.32       |     |
| 451X6  | F 243         |            | 55         | 60         | 62       | 39       | 4.32       |     |
| 451X6A | X1259         |            | 0          | 0          | 1        | 9        | 5.87       |     |
| 451X6B | X1259         |            | 12         | 19         | 23       | 9        | 5.87       |     |
| 451X6  | X1259         |            | 5          | 9          | 11       | 9        | 5.87       |     |
| 451X6A | X1261         |            | 0          | 0          | 1        | 9        | 6.62       |     |
| 451X6B | X1261         |            | 12         | 18         | 22       | 9        | 6.62       |     |
| 451X6  | X1261         |            | 5          | 8          | 11       | 9        | 6.62       |     |
| 451X6A | X1263         |            | 0          | 0          | 0        | 4        | 4.94       |     |
| 451X6B | X1263         |            | 4          | 8          | 6        | 4        | 4.94       |     |
| 451X6  | X1263         |            | 2          | 4          | 3        | 4        | 4.94       |     |
| 451X6A | X1267         |            | 0          | 0          | 0        | 4        | 6.35       |     |
| 451X6B | X1267         |            | 0          | 8          | 6        | 4        | 6.35       |     |
| 451X6  | X1267         |            | 0          | 4          | 3        | 4        | 6.35       |     |
| 451X6A | X1269         |            | 0          | 0          | 0        | 5        | 6.22       |     |
| 451X6B | X1269         |            | 0          | 8          | 7        | 5        | 6.22       |     |
| 451X6  | X1269         |            | 0          | 4          | 3        | 5        | 6.22       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 243 PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECTION (T AND I) OF LRUs ISSUED FROM SUPPLY

X1259 PERFORM OPERATIONAL TESTS OF AN/ALR-62 (V3) AFT RADAR RECEIVERS

X1261 PERFORM OPERATIONAL TESTS OF AN/ALR-62 (V3) FORWARD RADAR RECEIVERS

X1263 PERFORM OPERATIONAL TESTS OF AN/ALR-62 (V4) ANTENNA SWITCHING UNITS

X1267 PERFORM OPERATIONAL TESTS OF AN/ALR-62 (V4) DUAL CHANNEL RECEIVERS

X1269 PERFORM OPERATIONAL TESTS OF AN/ALR-62 (V4) MULTICHANNEL RECEIVERS

**TASK NUMBER: 60920**

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN LRUs THAT RUN ON THE CRS TEST STATION

**TASK NOTES:**

LRUs ARE FROM AN/ALR-62 SYSTEM; V3 AND V4 ARE BOTH AT  
MT HOME AFB AND RAF UPPER HEYFORD; V4 PECULIAR TO EF-111

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
DIGITAL MULTIMETER  
FREQUENCY COUNTER  
OSCILLOSCOPE  
RF POWER METER  
TEST STATION

**REFERENCES:**

APPLICABLE SHOP SYSTEMS TO  
APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A MEASURE TRANSMISSION POWER

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S INSTALL EXTENDER BOARDS  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S USE DIGITAL MULTIMETER TO MEASURE SYSTEM VOLTAGES  
S USE FREQUENCY COUNTER  
S USE OSCILLOSCOPE AND DVM PROBES TO CHECK SIGNALS  
S USE POWER METER TO MEASURE RF SIGNAL

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY CLAMPER CIRCUIT THEORY OF OPERATION  
 K APPLY DC CIRCUIT THEORY OF OPERATION  
 K APPLY FREQUENCY SENSITIVE FILTER THEORY OF OPERATION  
 K APPLY LRU THEORY OF OPERATION  
 K APPLY MICROWAVE OSCILLATOR OR AMPLIFIER THEORY OF OPERATION  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY RESONANT CAVITY THEORY OF OPERATION  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY TECHNICAL DATA  
 K APPLY TRANSISTOR AMPLIFIER COUPLING CIRCUIT THEORY OF OPERATION  
 K APPLY TRANSISTOR AMPLIFIER CIRCUIT THEORY OF OPERATION  
 K APPLY TRANSMISSION LINE THEORY OF OPERATION  
 K APPLY TTL THEORY OF OPERATION  
 K APPLY VOLTAGE REGULATOR THEORY OF OPERATION  
 K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING  
 K DETERMINE WHETHER MALFUNCTION IS IN TEST STATION, LRU, OR ADAPTER (TASK NUMBER: 61360)  
 K ISOLATE FAULTY CLAMPER CIRCUITS  
 K ISOLATE FAULTY DC CIRCUITS  
 K ISOLATE FAULTY FREQUENCY SENSITIVE FILTERS  
 K ISOLATE FAULTY MICROWAVE OSCILLATORS OR AMPLIFIERS  
 K ISOLATE FAULTY RESONANT CAVITIES  
 K ISOLATE FAULTY TRANSISTOR AMPLIFIER CIRCUITS  
 K ISOLATE FAULTY TRANSISTOR AMPLIFIER COUPLING CIRCUITS  
 K ISOLATE FAULTY TRANSMISSION LINES  
 K ISOLATE FAULTY TTLS  
 K ISOLATE FAULTY VOLTAGE REGULATORS  
 K PERFORM TRANSMISSION LINE CALCULATIONS  
 K PERFORM TRANSMISSION LINE MEASUREMENTS  
 K PERFORM TRANSMISSION POWER CALCULATIONS  
 K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)  
 K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
 K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
 K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | X1220         |            | 0          | 0          | 1        | 9        | 6.45       |     |
| 451X6B | X1220         |            | 4          | 15         | 21       | 9        | 6.45       |     |
| 451X6  | X1220         |            | 2          | 7          | 10       | 9        | 6.45       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | X1224         |            | 0          | 0          | 1        | 9        | 7.34       |     |
| 451X6B | X1224         |            | 15         | 19         | 21       | 9        | 7.34       |     |
| 451X6  | X1224         |            | 6          | 9          | 11       | 9        | 7.34       |     |
| 451X6A | X1227         |            | 0          | 0          | 0        | 3        | 5.56       |     |
| 451X6B | X1227         |            | 4          | 9          | 7        | 3        | 5.56       |     |
| 451X6  | X1227         |            | 2          | 5          | 3        | 3        | 5.56       |     |
| 451X6A | X1231         |            | 0          | 0          | 0        | 4        | 6.72       |     |
| 451X6B | X1231         |            | 4          | 9          | 6        | 4        | 6.72       |     |
| 451X6  | X1231         |            | 2          | 5          | 3        | 4        | 6.72       |     |
| 451X6A | X1233         |            | 0          | 0          | 0        | 4        | 7.08       |     |
| 451X6B | X1233         |            | 0          | 8          | 6        | 4        | 7.08       |     |
| 451X6  | X1233         |            | 0          | 4          | 3        | 4        | 7.08       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
X1220 ISOLATE MALFUNCTIONS IN AN/ALR-62 (V3) AFT RADAR RECEIVERS  
X1224 ISOLATE MALFUNCTIONS IN AN/ALR-62 (V3) FORWARD RADAR  
RECEIVERS  
X1227 ISOLATE MALFUNCTIONS IN AN/ALR-62 (V4) ANTENNA SWITCHING  
UNITS  
X1231 ISOLATE MALFUNCTIONS IN AN/ALR-62 (V4) DUAL CHANNEL  
RECEIVERS  
X1233 ISOLATE MALFUNCTIONS IN AN/ALR-62 (V4) MULTICHANNEL  
RECEIVERS

**TASK NUMBER:** 60930

**TASK STATEMENT:**

REPAIR LRUs THAT RUN ON THE CRS TEST STATION

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES  
CTK

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
APPLICABLE IPB

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

- A CLEAN CONTACTS (F 210)
- A ORDER PARTS
- A PERFORM ALIGNMENT
- A RESEAT SRUs
- A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)
- A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)
- A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)
- A REPAIR WIRING (TASK NUMBER: 61440)
- A TUNE OR ADJUST MICROWAVE OSCILLATORS OR AMPLIFIERS

**SKILLS:**

- S PERFORM VISUAL INSPECTIONS
- S USE COMMON HANDTOOLS

**KNOWLEDGE:**

- K ANNOTATE FORMS
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY TECHNICAL DATA

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | X1198         |            | 0          | 0          | 1        | 9        | 6.13       |     |
| 451X6B | X1198         |            | 12         | 19         | 21       | 9        | 6.13       |     |
| 451X6  | X1198         |            | 5          | 9          | 11       | 9        | 6.13       |     |
| 451X6A | X1201         |            | 0          | 0          | 1        | 10       | 7.31       |     |
| 451X6B | X1201         |            | 15         | 20         | 21       | 10       | 7.31       |     |
| 451X6  | X1201         |            | 6          | 10         | 11       | 10       | 7.31       |     |
| 451X6A | X1204         |            | 0          | 0          | 0        | 4        | 5.67       |     |
| 451X6B | X1204         |            | 0          | 8          | 7        | 4        | 5.67       |     |
| 451X6  | X1204         |            | 0          | 4          | 3        | 4        | 5.67       |     |
| 451X6A | X1205         |            | 0          | 0          | 0        | 4        | 6.53       |     |
| 451X6B | X1205         |            | 0          | 7          | 7        | 4        | 6.53       |     |
| 451X6  | X1205         |            | 0          | 3          | 3        | 4        | 6.53       |     |
| 451X6A | X1278         |            | 0          | 0          | 1        | 9        | 5.07       |     |
| 451X6B | X1278         |            | 12         | 19         | 21       | 9        | 5.07       |     |
| 451X6  | X1278         |            | 5          | 9          | 11       | 9        | 5.07       |     |
| 451X6A | X1282         |            | 0          | 0          | 1        | 9        | 5.77       |     |
| 451X6B | X1282         |            | 19         | 20         | 21       | 9        | 5.77       |     |
| 451X6  | X1282         |            | 8          | 10         | 10       | 9        | 5.77       |     |
| 451X6A | X1288         |            | 0          | 0          | 0        | 4        | 5.19       |     |
| 451X6B | X1288         |            | 0          | 8          | 5        | 4        | 5.19       |     |
| 451X6  | X1288         |            | 0          | 4          | 3        | 4        | 5.19       |     |
| 451X6A | X1290         |            | 0          | 0          | 1        | 4        | 5.30       |     |
| 451X6B | X1290         |            | 0          | 8          | 5        | 4        | 5.30       |     |
| 451X6  | X1290         |            | 0          | 4          | 3        | 4        | 5.30       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS

F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
LINE REPLACEABLE UNITS (LRU)

X1198 ALIGN AN/ALR-62 (V3) AFT RADAR RECEIVERS

X1201 ALIGN AN/ALR-62 (V3) FORWARD RADAR RECEIVERS

X1204 ALIGN AN/ALR-62 (V4) DUAL CHANNEL RECEIVERS

**USAF JOB INVENTORY TASK STATEMENTS:**

X1205 ALIGN AN/ALR-62 (V4) MULTICHANNEL RECEIVERS  
X1278 REMOVE OR REPLACE AN/ALR-62 (V3) AFT RADAR RECEIVER  
COMPONENTS  
X1282 REMOVE OR REPLACE AN/ALR-62 (V3) FORWARD RADAR RECEIVER  
SRUs OR COMPONENTS  
X1288 REMOVE OR REPLACE AN/ALR-62 (V4) DUAL CHANNEL RECEIVERS  
X1290 REMOVE OR REPLACE AN/ALR-62 (V4) MULTICHANNEL RECEIVERS

**TASK NUMBER:** 60940

**TASK STATEMENT:** .

PERFORM OPERATIONAL TESTS OF LRUs THAT RUN ON DPTS

**TASK NOTES:**

LRUs ARE FROM AN/ALR-62 SYSTEM; DP AND CI (V3 AND V4); IP (V3)

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
DIP METER  
TEST STATION

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR; FUNCTIONAL CHECK

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CALL UP TAPE  
A EXECUTE TEST

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S CONNECT LRU TO TEST STATION  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S USE DIP METER TO CENTER FREQUENCIES DURING VCO ALIGNMENT

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 243         |            | 61         | 62         | 65       | 39       | 4.32       |     |
| 451X6B | F 243         |            | 50         | 60         | 59       | 39       | 4.32       |     |
| 451X6  | F 243         |            | 55         | 60         | 62       | 39       | 4.32       |     |
| 451X6A | X1256         |            | 0          | 0          | 1        | 8        | 4.55       |     |
| 451X6B | X1256         |            | 15         | 25         | 22       | 8        | 4.55       |     |
| 451X6  | X1256         |            | 6          | 12         | 11       | 8        | 4.55       |     |
| 451X6A | X1257         |            | 0          | 0          | 1        | 8        | 5.33       |     |
| 451X6B | X1257         |            | 19         | 25         | 23       | 8        | 5.33       |     |
| 451X6  | X1257         |            | 8          | 12         | 11       | 8        | 5.33       |     |
| 451X6A | X1258         |            | 0          | 0          | 1        | 7        | 4.09       |     |
| 451X6B | X1258         |            | 15         | 22         | 22       | 7        | 4.09       |     |
| 451X6  | X1258         |            | 6          | 11         | 11       | 7        | 4.09       |     |
| 451X6A | X1264         |            | 0          | 0          | 0        | 5        | 4.94       |     |
| 451X6B | X1264         |            | 0          | 12         | 10       | 5        | 4.94       |     |
| 451X6  | X1264         |            | 0          | 6          | 5        | 5        | 4.94       |     |
| 451X6A | X1266         |            | 0          | 0          | 0        | 5        | 5.62       |     |
| 451X6B | X1266         |            | 4          | 13         | 10       | 5        | 5.62       |     |
| 451X6  | X1266         |            | 2          | 6          | 5        | 5        | 5.62       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 243 PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECTION (T AND I)  
OF LRUs ISSUED FROM SUPPLY  
X1256 PERFORM OPERATIONAL TESTS OF AN/ALR 62 (V3) CIs  
X1257 PERFORM OPERATIONAL TESTS OF AN/ALR 62 DP's  
X1258 PERFORM OPERATIONAL TESTS OF AN/ALR 62 IP's  
X1264 PERFORM OPERATIONAL TESTS OF AN/ALR-62 (V4) CONTROL  
INDICATORS  
X1266 PERFORM OPERATIONAL TESTS OF AN/ALR-62 (V4) DIGITAL  
PROCESSORS

**TASK NUMBER: 60950**

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN LRUs THAT RUN ON DPTS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
DIGITAL MULTIMETER  
DIP METER  
ESD PROTECTIVE EQUIPMENT  
EXTENDER BOARDS  
OSCILLOSCOPE  
RF POWER METER  
TEST STATION

**REFERENCES:**

APPLICABLE SHOP SYSTEMS TO  
APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S INSTALL EXTENDER BOARDS  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S USE DIGITAL MULTIMETER TO MEASURE VOLTAGE  
S USE DIP METER TO CENTER FREQUENCIES DURING VCO ALIGNMENT  
S USE OSCILLOSCOPE TO MEASURE AMPLITUDE AND FREQUENCIES  
S USE RF POWER METER TO MEASURE RF OUTPUT

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY CHOPPER (SYNCHROUS VIBRATOR) THEORY OF OPERATION

## KNOWLEDGE:

- K APPLY DC CIRCUIT THEORY OF OPERATION
- K APPLY DISPLAY TUBE THEORY OF OPERATION
- K APPLY ESD PRECAUTIONS
- K APPLY INTEGRATED CIRCUIT THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT COUNTER THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT REGISTER THEORY OF OPERATION
- K APPLY LRU THEORY OF OPERATION
- K APPLY MAIN LOGIC GATE THEORY OF OPERATION
- K APPLY MICROPROCESSOR THEORY OF OPERATION
- K APPLY MICROWAVE OSCILLATOR OR AMPLIFIER THEORY OF OPERATION
- K APPLY OPERATIONAL AMPLIFIER THEORY OF OPERATION
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY POWER SUPPLY FILTER THEORY OF OPERATION
- K APPLY POWER SUPPLY RECTIFIER THEORY OF OPERATION
- K APPLY POWER SUPPLY THEORY OF OPERATION
- K APPLY RAMP A/D CONVERTER THEORY OF OPERATION
- K APPLY RESISTOR THEORY OF OPERATION
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY SOLID STATE DIODE THEORY OF OPERATION
- K APPLY TECHNICAL DATA
- K APPLY THEORY OF OPERATION OF COMPUTER MEMORIES
- K APPLY TRANSISTOR AMPLIFIER CIRCUIT THEORY OF OPERATION
- K APPLY TRANSMISSION LINE THEORY OF OPERATION
- K APPLY TTL THEORY OF OPERATION
- K APPLY VOLTAGE REGULATOR THEORY OF OPERATION
- K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING
- K DETERMINE WHETHER MALFUNCTION IS IN TEST STATION, LRU, OR ADAPTER (TASK NUMBER: 61360)
- K ISOLATE FAULTY CHOPPERS (SYNCHRONOUS VIBRATORS)
- K ISOLATE FAULTY COMPUTER MEMORIES
- K ISOLATE FAULTY DC CIRCUITS
- K ISOLATE FAULTY DISPLAY TUBES
- K ISOLATE FAULTY INTEGRATED CIRCUITS
- K ISOLATE FAULTY LOGIC COUNTERS
- K ISOLATE FAULTY MAIN LOGIC GATES
- K ISOLATE FAULTY MICROPROCESSORS
- K ISOLATE FAULTY MICROWAVE OSCILLATORS OR AMPLIFIERS
- K ISOLATE FAULTY OPERATIONAL AMPLIFIERS
- K ISOLATE FAULTY POWER SUPPLIES
- K ISOLATE FAULTY POWER SUPPLY FILTERS
- K ISOLATE FAULTY POWER SUPPLY RECTIFIERS
- K ISOLATE FAULTY RAMP A/D CONVERTERS
- K ISOLATE FAULTY REGISTER LOGIC CIRCUITS
- K ISOLATE FAULTY RESISTORS
- K ISOLATE FAULTY SOLID STATE DIODES
- K ISOLATE FAULTY TRANSISTOR AMPLIFIER CIRCUITS
- K ISOLATE FAULTY TRANSMISSION LINES
- K ISOLATE FAULTY TTLS
- K PERFORM TRANSMISSION LINE CALCULATIONS
- K PERFORM TRANSMISSION LINE MEASUREMENTS
- K PERFORM TRANSMISSION POWER CALCULATIONS
- K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)

**KNOWLEDGE:**

K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | X1221         |            | 0          | 0          | 1        | 9        | 5.36       |     |
| 451X6B | X1221         |            | 15         | 26         | 25       | 9        | 5.36       |     |
| 451X6  | X1221         |            | 6          | 12         | 12       | 9        | 5.36       |     |
| 451X6A | X1222         |            | 0          | 0          | 1        | 9        | 6.21       |     |
| 451X6B | X1222         |            | 12         | 25         | 24       | 9        | 6.21       |     |
| 451X6  | X1222         |            | 5          | 12         | 12       | 9        | 6.21       |     |
| 451X6A | X1226         |            | 0          | 0          | 1        | 7        | 4.47       |     |
| 451X6B | X1226         |            | 15         | 24         | 23       | 7        | 4.47       |     |
| 451X6  | X1226         |            | 6          | 11         | 11       | 7        | 4.47       |     |
| 451X6A | X1228         |            | 0          | 0          | 0        | 5        | 5.09       |     |
| 451X6B | X1228         |            | 4          | 13         | 10       | 5        | 5.09       |     |
| 451X6  | X1228         |            | 2          | 6          | 5        | 5        | 5.09       |     |
| 451X6A | X1230         |            | 0          | 0          | 0        | 4        | 6.55       |     |
| 451X6B | X1230         |            | 8          | 15         | 10       | 4        | 6.55       |     |
| 451X6  | X1230         |            | 3          | 7          | 5        | 4        | 6.55       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
X1221 ISOLATE MALFUNCTIONS IN AN/ALR-62 (V3) CIs  
X1222 ISOLATE MALFUNCTIONS IN AN/ALR-62 (V3) DPs  
X1226 ISOLATE MALFUNCTIONS IN AN/ALR-62 (V3) INDICATOR PANELS  
X1228 ISOLATE MALFUNCTIONS IN AN/ALR-62 (V4) CONTROL INDICATORS  
X1230 ISOLATE MALFUNCTIONS IN AN/ALR-62 (V4) DIGITAL PROCESSORS

**TASK NUMBER: 60960**

**TASK STATEMENT:**

REPAIR LRUs THAT RUN ON DPTS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES

CTK

ESD PROTECTIVE EQUIPMENT

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

APPLICABLE IPB

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ADJUST MICROWAVE OSCILLATORS OR AMPLIFIERS

A CLEAN CONTACTS (F 210)

A MEASURE TRANSMISSION POWER

A ORDER PARTS

A PERFORM ALIGNMENT

A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)

A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)

A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)

A REPAIR WIRING (TASK NUMBER: 61440)

A RESEAT SRUs

**SKILLS:**

S USE COMMON HANDTOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS

K APPLY ESD PRECAUTIONS

K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS

K APPLY SHOP SAFETY PROCEDURES

K APPLY TECHNICAL DATA

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | X1199         |            | 0          | 0          | 1        | 10       | 5.23       |     |
| 451X6B | X1199         |            | 15         | 24         | 25       | 10       | 5.23       |     |
| 451X6  | X1199         |            | 6          | 11         | 12       | 10       | 5.23       |     |
| 451X6A | X1200         |            | 0          | 0          | 1        | 9        | 5.63       |     |
| 451X6B | X1200         |            | 15         | 24         | 24       | 9        | 5.63       |     |
| 451X6  | X1200         |            | 6          | 11         | 12       | 9        | 5.63       |     |
| 451X6A | X1202         |            | 0          | 0          | 0        | 5        | 5.35       |     |
| 451X6B | X1202         |            | 8          | 14         | 10       | 5        | 5.35       |     |
| 451X6  | X1202         |            | 3          | 7          | 5        | 5        | 5.35       |     |
| 451X6A | X1203         |            | 0          | 0          | 0        | 5        | 5.41       |     |
| 451X6B | X1203         |            | 4          | 12         | 10       | 5        | 5.41       |     |
| 451X6  | X1203         |            | 2          | 6          | 5        | 5        | 5.41       |     |
| 451X6A | X1279         |            | 0          | 0          | 1        | 9        | 4.39       |     |
| 451X6B | X1279         |            | 19         | 26         | 23       | 9        | 4.39       |     |
| 451X6  | X1279         |            | 8          | 12         | 11       | 9        | 4.39       |     |
| 451X6A | X1280         |            | 0          | 0          | 1        | 9        | 4.50       |     |
| 451X6B | X1280         |            | 15         | 25         | 23       | 9        | 4.50       |     |
| 451X6  | X1280         |            | 6          | 12         | 11       | 9        | 4.50       |     |
| 451X6A | X1284         |            | 0          | 0          | 1        | 8        | 3.75       |     |
| 451X6B | X1284         |            | 15         | 20         | 21       | 8        | 3.75       |     |
| 451X6  | X1284         |            | 6          | 10         | 10       | 8        | 3.75       |     |
| 451X6A | X1285         |            | 0          | 0          | 0        | 4        | 3.99       |     |
| 451X6B | X1285         |            | 8          | 14         | 9        | 4        | 3.99       |     |
| 451X6  | X1285         |            | 3          | 7          | 4        | 4        | 3.99       |     |
| 451X6A | X1287         |            | 0          | 0          | 0        | 4        | 4.75       |     |
| 451X6B | X1287         |            | 4          | 13         | 9        | 4        | 4.75       |     |
| 451X6  | X1287         |            | 2          | 6          | 4        | 4        | 4.75       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS

F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
LINE REPLACEABLE UNITS (LRU)

X1199 ALIGN AN/ALR-62 (V3) CONTROL INDICATORS (CI)

**USAF JOB INVENTORY TASK STATEMENTS:**

X1200 ALIGN AN/ALR-62 (V3) DIGITAL PROCESSORS (DP)  
X1202 ALIGN AN/ALR-62 (V4) CIs  
X1203 ALIGN AN/ALR-62 (V4) DPs  
X1279 REMOVE OR REPLACE AN/ALR-62 (V3) CI SRUs OR COMPONENTS  
X1280 REMOVE OR REPLACE AN/ALR-62 (V3) DP SRUs OR COMPONENTS  
X1284 REMOVE OR REPLACE AN/ALR-62 (V3) IP SRUs OR COMPONENTS  
X1285 REMOVE OR REPLACE AN/ALR-62 (V4) CONTROL INDICATOR SRUs OR  
COMPONENTS  
X1287 REMOVE OR REPLACE AN/ALR-62 (V4) DIGITAL PROCESSOR SRUs OR  
COMPONENTS

**TASK NUMBER:** 60970

**TASK STATEMENT:** .

MAINTAIN DP/CIU TEST ADAPTER

**TASK NOTES:**

DALMO VICTOR MADE THREE OF THESE UNITS. THEY ARE AT MT HOME AFB,  
RAF UPPER HEYFORD, AND ROBINS AFB.

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES  
CTK  
DPTS  
ESD PROTECTIVE EQUIPMENT

**REFERENCES:**

33AA39-11-1  
APPLICABLE IPB

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN SRUs  
A CLEAN CONTACTS (F 210)  
A ISOLATE DP/CIU TEST ADAPTER MALFUNCTION TO COMPONENT LEVEL  
A ORDER PARTS  
A PERFORM OPERATIONAL CHECK (SELF CONTAINED)  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)  
A REPAIR WIRING (TASK NUMBER: 61440)  
A RESEAT SRUs

**SKILLS:**

S CONNECT CABLES  
S OPERATE DPTS  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS

## KNOWLEDGE :

- K ANNOTATE FORMS
- K APPLY AC CIRCUIT THEORY OF OPERATION
- K APPLY DC CIRCUIT THEORY OF OPERATION
- K APPLY ESD PRECAUTIONS
- K APPLY FLIP-FLOP THEORY OF OPERATION
- K APPLY LED THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT ZENER DIODE THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT COUNTER THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT REGISTER THEORY OF OPERATION
- K APPLY MAIN LOGIC GATE THEORY OF OPERATION
- K APPLY OPERATIONAL AMPLIFIER THEORY OF OPERATION
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY POWER SUPPLY RECTIFIER THEORY OF OPERATION
- K APPLY RELAY THEORY OF OPERATION
- K APPLY RESISTOR THEORY OF OPERATION
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY SOLID STATE DIODE THEORY OF OPERATION
- K APPLY SWITCH THEORY OF OPERATION
- K APPLY TECHNICAL DATA
- K APPLY TRANSFORMER THEORY OF OPERATION
- K APPLY TTL THEORY OF OPERATION
- K APPLY VOLTAGE REGULATOR THEORY OF OPERATION
- K ISOLATE FAULTY FLIP-FLOPS
- K ISOLATE FAULTY LEDs
- K ISOLATE FAULTY LIMITER CIRCUIT DIODES
- K ISOLATE FAULTY LIMITER CIRCUIT ZENER DIODES
- K ISOLATE FAULTY LIMITER TRANSISTOR CIRCUITS
- K ISOLATE FAULTY LOGIC COUNTERS
- K ISOLATE FAULTY MAIN LOGIC GATES
- K ISOLATE FAULTY OPERATIONAL AMPLIFIERS
- K ISOLATE FAULTY POWER SUPPLY RECTIFIERS
- K ISOLATE FAULTY REGISTER LOGIC CIRCUITS
- K ISOLATE FAULTY RELAYS
- K ISOLATE FAULTY RESISTORS
- K ISOLATE FAULTY SOLID STATE DIODES
- K ISOLATE FAULTY SWITCHES
- K ISOLATE FAULTY TRANSFORMERS
- K ISOLATE FAULTY TTLs
- K ISOLATE FAULTY VOLTAGE REGULATORS
- K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)
- K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)
- K TROUBLESHOOT AC CIRCUITS
- K TROUBLESHOOT DC CIRCUITS
- K TROUBLESHOOT FLIP-FLOPS
- K TROUBLESHOOT LIMITER CIRCUIT DIODES
- K TROUBLESHOOT LIMITER CIRCUIT TRANSISTORS
- K TROUBLESHOOT LIMITER CIRCUIT ZENER DIODES
- K TROUBLESHOOT LOGIC COUNTERS
- K TROUBLESHOOT LOGIC REGISTERS

**KNOWLEDGE:**

K TROUBLESHOOT MAIN LOGIC GATES  
K TROUBLESHOOT OPERATIONAL AMPLIFIERS  
K TROUBLESHOOT POWER SUPPLY RECTIFIERS  
K TROUBLESHOOT RELAYS  
K TROUBLESHOOT TRANSFORMERS  
K TROUBLESHOOT TTL LOGIC FAMILIES  
K TROUBLESHOOT VOLTAGE REGULATOR  
K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES

**TASK NUMBER:** 60980

**TASK STATEMENT:**

MAINTAIN AMP/DETs

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

AMP/DET TEST SET  
CLEANING SOLVENTS AND BRUSHES  
CTK  
DIGITAL MULTIMETER  
MODULATOR  
OSCILLOSCOPE  
PIN MODULATOR  
RF POWER METER  
PULSE GENERATOR  
RF GENERATOR  
RMS VOLTMETER  
TUNABLE BANPASS FILTER

**REFERENCES:**

12P3-2-102

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CLEAN CONTACTS (F 210)  
A ORDER PARTS  
A PERFORM OPERATIONAL TESTS OF AMP/DETs (U 951)  
A ISOLATE MALFUNCTIONS IN AMP/DETs  
A ALIGN AMP/DET (U 883)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)  
A RESEAT SRUs

**SKILLS:**

S PERFORM VISUAL INSPECTIONS  
S USE AMP/DET TEST SET  
S USE COMMON HANDTOOLS  
S USE DIGITAL MULTIMETER TO MEASURE VOLTAGES  
S USE MODULATORS

**SKILLS:**

S USE OSCILLOSCOPE TO MEASURE SIGNALS  
S USE PULSE GENERATOR  
S USE RF GENERATOR  
S USE RF POWER METER TO MEASURE OUTPUT  
S USE RMS VOLTMETER TO MEASURE NOISE LEVELS  
S USE TUNABLE BANPASS FILTER

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K PERFORM FREQUENCY NOTATIONS  
K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION  
PROCEDURES (F 278)  
K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | U 883         |            | 0          | 0          | 0        | 10       | 5.16       |     |
| 451X6B | U 883         |            | 8          | 15         | 17       | 10       | 5.16       |     |
| 451X6  | U 883         |            | 3          | 7          | 9        | 10       | 5.16       |     |
| 451X6A | U 951         |            | 0          | 0          | 0        | 9        | 4.92       |     |
| 451X6B | U 951         |            | 4          | 12         | 17       | 9        | 4.92       |     |
| 451X6  | U 951         |            | 2          | 6          | 8        | 9        | 4.92       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
U 883 ALIGN AMPLIFIER/DETECTORS (AMP/DET)  
U 951 PERFORM OPERATIONAL TESTS OF AMP/DETS

**TASK NUMBER: 60990**

**TASK STATEMENT:**

MAINTAIN AMP/DET TEST SETS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES  
CTK  
MULTIMETER  
OSCILLOSCOPE  
SIGNAL GENERATOR

**REFERENCES:**

33D7-22-24-2

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CLEAN CONTACTS (F 210)  
A ORDER PARTS  
A PERFORM OPERATIONAL TESTS OF AMP/DET TEST SETS (U 950)  
A ISOLATE MALFUNCTIONS IN AMP/DET TEST SETS  
A ALIGN AMP/DET TEST SETS (U 884)  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REPAIR WIRING (TASK NUMBER: 61440)  
A RESEAT SRUs

**SKILLS:**

S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S USE MULTIMETER TO MEASURE VOLTAGES  
S USE OSCILLOSCOPE TO MEASURE SIGNALS  
S USE SIGNAL GENERATOR

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY AC CIRCUIT THEORY OF OPERATION  
K APPLY BIPOLAR JUNCTION TRANSISTOR THEORY OF OPERATION

**KNOWLEDGE:**

K APPLY CAPACITOR THEORY OF OPERATION  
 K APPLY CLAMPER CIRCUIT THEORY OF OPERATION  
 K APPLY DC CIRCUIT THEORY OF OPERATION  
 K APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATION  
 K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY POWER SUPPLY THEORY OF OPERATION  
 K APPLY RELAY THEORY OF OPERATION  
 K APPLY RESISTOR THEORY OF OPERATION  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY SOLID STATE DIODE THEORY OF OPERATION  
 K APPLY TECHNICAL DATA  
 K APPLY TRANSFORMER THEORY OF OPERATION  
 K APPLY TRANSISTOR AMPLIFIER CIRCUIT THEORY OF OPERATION  
 K APPLY VOLTAGE REGULATOR THEORY OF OPERATION  
 K ISOLATE FAULTY AC CIRCUITS  
 K ISOLATE FAULTY BIPOLAR JUNCTION TRANSISTORS  
 K ISOLATE FAULTY CAPACITORS  
 K ISOLATE FAULTY CLAMPER CIRCUITS  
 K ISOLATE FAULTY DC CIRCUITS  
 K ISOLATE FAULTY LIMITER CIRCUIT DIODES  
 K ISOLATE FAULTY LIMITER TRANSISTOR CIRCUITS  
 K ISOLATE FAULTY POWER SUPPLIES  
 K ISOLATE FAULTY RELAYS  
 K ISOLATE FAULTY RESISTORS  
 K ISOLATE FAULTY SOLID STATE DIODES  
 K ISOLATE FAULTY TRANSFORMERS  
 K ISOLATE FAULTY TRANSISTOR AMPLIFIER CIRCUITS  
 K ISOLATE FAULTY VOLTAGE REGULATORS  
 K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION  
 PROCEDURES (F 278)  
 K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
 K TROUBLESHOOT AC CIRCUITS  
 K TROUBLESHOOT CLAMPER CIRCUITS  
 K TROUBLESHOOT DC CIRCUITS  
 K TROUBLESHOOT VOLTAGE REGULATOR  
 K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
 K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | U 884         |            | 0          | 0          | 0        | 10       | 5.01       |     |
| 451X6B | U 884         |            | 4          | 8          | 14       | 10       | 5.01       |     |
| 451X6  | U 884         |            | 2          | 4          | 7        | 10       | 5.01       |     |
| 451X6A | U 902         |            | 0          | 0          | 0        | 7        | 5.83       |     |
| 451X6B | U 902         |            | 0          | 11         | 14       | 7        | 5.83       |     |
| 451X6  | U 902         |            | 0          | 5          | 7        | 7        | 5.83       |     |
| 451X6A | U 950         |            | 0          | 0          | 0        | 9        | 4.51       |     |
| 451X6B | U 950         |            | 4          | 9          | 14       | 9        | 4.51       |     |
| 451X6  | U 950         |            | 2          | 5          | 7        | 9        | 4.51       |     |
| 451X6A | U 991         |            | 0          | 0          | 0        | 7        | 3.87       |     |
| 451X6B | U 991         |            | 4          | 8          | 13       | 7        | 3.87       |     |
| 451X6  | U 991         |            | 2          | 4          | 6        | 7        | 3.87       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
U 884 ALIGN AMP/DET TEST SETS  
U 902 ISOLATE MALFUNCTIONS IN AMP/DET TEST SETS TO SRU OR  
COMPONENT LEVEL  
U 950 PERFORM OPERATIONAL TESTS OF AMP/DET TEST SETS  
U 991 REMOVE OR REPLACE AMP/DET TEST SET SRUs OR COMPONENTS

**TASK NUMBER:** 61000

**TASK STATEMENT:** .

MAINTAIN AN/ALR-62 MOCKUPS

**TASK NOTES:**

V3 MOCKUP CONSISTS OF AFT RADAR RECEIVER, AFT FORWARD RADAR RECEIVER, ELECTRICAL EQUIPMENT CABINET AND FORWARD RECEIVER/DIGITAL PROCESSOR RACK. V4 MOCKUP (EF VERSION) CONSISTS OF DCR, MCR, ASU, DIGITAL PROCESSOR RACK, AND MCR RACK.

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

AN/USM-427  
CLEANING SOLVENTS AND BRUSHES  
CTK  
MULTIMETER  
OSCILLOSCOPE  
TORQUE WRENCH

**REFERENCES:**

1F-111A-2-20  
1F-111(E)A-2-20-2 (EF)  
1-1A-14

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CLEAN CONTACTS (F 210)  
A ORDER PARTS  
A PERFORM BUILT-IN SELF-TESTS OF AN/ALR-62 MOCKUPS (U 948)  
A ISOLATE MALFUNCTIONS IN AN/ALR-62 MOCKUPS  
A ALIGN SIMULATORS OR MOCKUPS (F 205)  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE LRUs  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)  
A REMOVE AND REPLACE TRANSMISSION LINE  
A REPAIR WIRING (TASK NUMBER: 61440)  
A RESEAT SRUs

**SKILLS:**

S CONNECT CABLES  
S PERFORM VISUAL INSPECTIONS  
S USE AN/USM-427 TO TEST MOCK-UP AFTER REPAIR  
S USE COMMON HANDTOOLS  
S USE MULTIMETER TO MEASURE VOLTAGE AND RESISTANCE  
S USE OSCILLOSCOPE TO MEASURE SIGNALS  
S USE TORQUE WRENCH

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY AC CIRCUIT THEORY OF OPERATION  
K APPLY DC CIRCUIT THEORY OF OPERATION  
K APPLY LED THEORY OF OPERATION  
K APPLY LRU THEORY OF OPERATION  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY RELAY THEORY OF OPERATION  
K APPLY RESISTOR THEORY OF OPERATION  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY SOLID STATE DIODE THEORY OF OPERATION  
K APPLY TECHNICAL DATA  
K APPLY TRANSMISSION LINE THEORY OF OPERATION  
K ISOLATE FAULTY RELAYS  
K ISOLATE FAULTY TRANSMISSION LINES  
K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)  
K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
K TROUBLESHOOT AC CIRCUITS  
K TROUBLESHOOT DC CIRCUITS  
K TROUBLESHOOT RELAYS  
K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 205         |            | 5          | 12         | 17       | 14       | 5.41       |     |
| 451X6B | F 205         |            | 46         | 42         | 33       | 14       | 5.41       |     |
| 451X6  | F 205         |            | 22         | 27         | 24       | 14       | 5.41       |     |
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 234         |            | 3          | 17         | 22       | 20       | 6.19       |     |
| 451X6B | F 234         |            | 35         | 44         | 38       | 20       | 6.19       |     |
| 451X6  | F 234         |            | 15         | 29         | 29       | 20       | 6.19       |     |
| 451X6A | F 268         |            | 3          | 12         | 19       | 19       | 3.93       |     |
| 451X6B | F 268         |            | 27         | 39         | 34       | 19       | 3.93       |     |
| 451X6  | F 268         |            | 12         | 25         | 26       | 19       | 3.93       |     |
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | U 903         |            | 0          | 0          | 1        | 7        | 5.76       |     |
| 451X6B | U 903         |            | 12         | 16         | 16       | 7        | 5.76       |     |
| 451X6  | U 903         |            | 5          | 8          | 8        | 7        | 5.76       |     |
| 451X6A | U 948         |            | 0          | 0          | 0        | 5        | 4.23       |     |
| 451X6B | U 948         |            | 15         | 15         | 12       | 5        | 4.23       |     |
| 451X6  | U 948         |            | 6          | 7          | 6        | 5        | 4.23       |     |
| 451X6A | U 992         |            | 0          | 0          | 1        | 5        | 3.79       |     |
| 451X6B | U 992         |            | 8          | 15         | 14       | 5        | 3.79       |     |
| 451X6  | U 992         |            | 3          | 7          | 7        | 5        | 3.79       |     |
| 451X6A | X1223         |            | 0          | 0          | 0        | 8        | 4.44       |     |
| 451X6B | X1223         |            | 8          | 16         | 19       | 8        | 4.44       |     |
| 451X6  | X1223         |            | 3          | 8          | 9        | 8        | 4.44       |     |
| 451X6A | X1225         |            | 0          | 0          | 1        | 8        | 4.66       |     |
| 451X6B | X1225         |            | 12         | 15         | 19       | 8        | 4.66       |     |
| 451X6  | X1225         |            | 5          | 7          | 10       | 8        | 4.66       |     |
| 451X6A | X1229         |            | 0          | 0          | 0        | 4        | 4.83       |     |
| 451X6B | X1229         |            | 0          | 9          | 9        | 4        | 4.83       |     |
| 451X6  | X1229         |            | 0          | 5          | 4        | 4        | 4.83       |     |
| 451X6A | X1232         |            | 0          | 0          | 0        | 4        | 5.45       |     |
| 451X6B | X1232         |            | 0          | 7          | 6        | 4        | 5.45       |     |
| 451X6  | X1232         |            | 0          | 3          | 3        | 4        | 5.45       |     |
| 451X6A | X1260         |            | 0          | 0          | 1        | 8        | 4.24       |     |
| 451X6B | X1260         |            | 12         | 18         | 19       | 8        | 4.24       |     |
| 451X6  | X1260         |            | 5          | 8          | 9        | 8        | 4.24       |     |
| 451X6A | X1262         |            | 0          | 0          | 1        | 8        | 4.27       |     |
| 451X6B | X1262         |            | 8          | 13         | 17       | 8        | 4.27       |     |
| 451X6  | X1262         |            | 3          | 6          | 9        | 8        | 4.27       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | X1265         |            | 0          | 0          | 0        | 3        | 4.61       |     |
| 451X6B | X1265         |            | 4          | 9          | 8        | 3        | 4.61       |     |
| 451X6  | X1265         |            | 2          | 5          | 4        | 3        | 4.61       |     |
| 451X6A | X1268         |            | 0          | 0          | 0        | 3        | 4.77       |     |
| 451X6B | X1268         |            | 0          | 7          | 6        | 3        | 4.77       |     |
| 451X6  | X1268         |            | 0          | 3          | 3        | 3        | 4.77       |     |
| 451X6A | X1281         |            | 0          | 0          | 1        | 8        | 3.98       |     |
| 451X6B | X1281         |            | 8          | 13         | 15       | 8        | 3.98       |     |
| 451X6  | X1281         |            | 3          | 6          | 8        | 8        | 3.98       |     |
| 451X6A | X1283         |            | 0          | 0          | 1        | 8        | 4.02       |     |
| 451X6B | X1283         |            | 15         | 16         | 15       | 8        | 4.02       |     |
| 451X6  | X1283         |            | 6          | 8          | 8        | 8        | 4.02       |     |
| 451X6A | X1286         |            | 0          | 0          | 0        | 3        | 4.15       |     |
| 451X6B | X1286         |            | 4          | 9          | 7        | 3        | 4.15       |     |
| 451X6  | X1286         |            | 2          | 5          | 4        | 3        | 4.15       |     |
| 451X6A | X1289         |            | 0          | 0          | 0        | 3        | 4.47       |     |
| 451X6B | X1289         |            | 0          | 7          | 5        | 3        | 4.47       |     |
| 451X6  | X1289         |            | 0          | 3          | 3        | 3        | 4.47       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 205 ALIGN SIMULATORS OR MOCKUPS  
 F 210 CLEAN CONTACTS  
 F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
 LINE REPLACEABLE UNITS (LRU)  
 F 234 ISOLATE MALFUNCTIONS IN SIMULATORS OR MOCKUPS  
 F 268 REMOVE OR REPLACE SIMULATOR OR MOCKUP SUBASSEMBLIES  
 F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
 U 903 ISOLATE MALFUNCTIONS IN AN/ALR-62 (V4) MOCKUPS  
 U 948 PERFORM BUILT-IN SELF-TESTS OF AN/ALR-62 (V4) MOCKUP  
 SYSTEMS  
 U 992 REMOVE OR REPLACE AN/ALR-62 (V4) MOCKUP SRUs OR COMPONENTS  
 X1223 ISOLATE MALFUNCTIONS IN AN/ALR-62 (V3) ELECTRICAL EQUIPMENT  
 CABINETS  
 X1225 ISOLATE MALFUNCTIONS IN AN/ALR-62 (V3) FORWARD  
 RECEIVER/DIGITAL PROCESSOR RACKS  
 X1229 ISOLATE MALFUNCTIONS IN AN/ALR-62 (V4) DIGITAL PROCESSOR  
 RACKS  
 X1232 ISOLATE MALFUNCTIONS IN AN/ALR-62 (V4) MULTICHANNEL  
 RECEIVER RACKS  
 X1260 PERFORM OPERATIONAL TESTS OF AN/ALR-62 (V3) ELECTRICAL  
 EQUIPMENT CABINETS  
 X1262 PERFORM OPERATIONAL TESTS OF AN/ALR-62 (V3) FORWARD  
 RECEIVER/DIGITAL PROCESSOR RACKS

**USAF JOB INVENTORY TASK STATEMENTS:**

- X1265 PERFORM OPERATIONAL TESTS OF AN/ALR-62 (V4) DIGITAL  
PROCESSOR RACKS
- X1268 PERFORM OPERATIONAL TESTS OF AN/ALR-62 (V4) MULTICHANNEL  
RECEIVER RACKS
- X1281 REMOVE OR REPLACE AN/ALR-62 (V3) ELECTRICAL EQUIPMENT  
CABINETS
- X1283 REMOVE OR REPLACE AN/ALR-62 (V3) FORWARD RECEIVER/DIGITAL  
PROCESSOR RACKS
- X1286 REMOVE OR REPLACE AN/ALR-62 (V4) DIGITAL PROCESSOR RACK  
SRUs OR COMPONENTS
- X1289 REMOVE OR REPLACE AN/ALR-62 (V4) MULTICHANNEL RECEIVER  
RACKS

**TASK NUMBER:** 61010

**TASK STATEMENT:**

PERFORM SASE PERIODIC INSPECTIONS (Y1334)

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

100ML BOTTLE  
CLEANING SOLVENTS AND BRUSHES  
CTK  
DISK  
LINT FREE CLOTHS  
PATEC

**REFERENCES:**

33D7-13-66-21  
33D7-13-66-21-2

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

- A ASSIST BIO-ENVIRONMENTAL PERSONNEL IN INSPECTING FORWARD AND AFT ANTENNA SHIELDS (HATS)
- A CALIBRATE SASE
- A CLEAN CONTACTS (F 210)
- A CLEAN TEST STATION BLOWERS AND FILTERS (F 219)
- A ORDER PARTS
- A PERFORM OPERATIONAL TEST OF SASE (TASK NUMBER: 61020) (Y1332)
- A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)
- A REPLACE COOLANT FILTER
- A SERVICE DISK DRIVE
- A TAKE COOLANT SAMPLE

**SKILLS:**

- S CONNECT CABLES
- S LOAD DISK

**SKILLS:**

S OPERATE POD  
 S OPERATE SASE  
 S PERFORM VISUAL INSPECTIONS  
 S USE BOTTLE TO COLLECT SAMPLE  
 S USE COMMON HANDTOOLS  
 S USE PATEC TO CALIBRATE SASE

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY PROPER CARE OF DISKS  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY TECHNICAL DATA  
 K IDENTIFY CHAFFING CHARACTERISTICS  
 K PROCESS COOLANT SAMPLE

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 219         |            | 89         | 88         | 82       | 45       | 2.78       |     |
| 451X6B | F 219         |            | 85         | 85         | 78       | 45       | 2.78       |     |
| 451X6  | F 219         |            | 86         | 85         | 80       | 45       | 2.78       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | Y1332         |            | 0          | 0          | 0        | 2        | 5.38       |     |
| 451X6B | Y1332         |            | 8          | 4          | 7        | 2        | 5.38       |     |
| 451X6  | Y1332         |            | 3          | 2          | 3        | 2        | 5.38       |     |
| 451X6A | Y1334         |            | 0          | 0          | 0        | 2        | 4.98       |     |
| 451X6B | Y1334         |            | 8          | 2          | 7        | 2        | 4.98       |     |
| 451X6  | Y1334         |            | 3          | 2          | 3        | 2        | 4.98       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
 F 219 INSPECT AND CLEAN TEST STATION BLOWERS AND FILTERS  
 F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
 LINE REPLACEABLE UNITS (LRU)  
 Y1332 PERFORM OPERATIONAL TEST OF SASE  
 Y1334 PERFORM SASE PERIODIC INSPECTIONS

**TASK NUMBER:** 61020

**TASK STATEMENT:**

PERFORM OPERATIONAL TESTS OF SASE (Y1332)

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

81B-QRC8001/POD-U001-00A  
81B-QRC8001/TST-T001-00A  
CTK  
DISK  
FREQUENCY COUNTER  
FRTS  
MULTIMETER  
OSCILLOSCOPE  
PATEC  
SIGNAL GENERATOR  
SPECTRUM ANALYZER  
TORQUE WRENCH

**REFERENCES:**

33D7-13-66-21  
33D7-13-66-21-2

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR; FUNCTIONAL CHECK

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A EXECUTE TEST

**SKILLS:**

S CONNECT CABLES  
S LOAD DISKS  
S OPERATE SASE  
S USE COMMON HANDTOOLS  
S USE FREQUENCY COUNTER  
S USE FRTS  
S USE MULTIMETER  
S USE OSCILLOSCOPE  
S USE PATEC  
S USE SIGNAL GENERATOR

**SKILLS:**

S USE SPECTRUM ANALYZER  
S USE TORQUE WRENCH

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K DETERMINE WHICH PORTION OF SELF-TEST TO EXECUTE

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | Y1332         |            | 0          | 0          | 0        | 2        | 5.38       |     |
| 451X6B | Y1332         |            | 8          | 4          | 7        | 2        | 5.38       |     |
| 451X6  | Y1332         |            | 3          | 2          | 3        | 2        | 5.38       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

Y1332 PERFORM OPERATIONAL TESTS OF SASE

**TASK NUMBER:** 61030

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN SASE

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

81B-QRC8001/POD-U001-00A  
81B-QRC8001/TST-T001-00A  
CTK  
ESD PROTECTIVE EQUIPMENT  
FREQUENCY COUNTER  
FRTS  
MULTIMETER  
OSCILLOSCOPE  
SIGNAL GENERATOR  
SPECTRUM ANALYZER

**REFERENCES:**

33D7-13-66-21  
33D7-13-66-21-2

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**SKILLS:**

S LOAD DISKS  
S OPERATE SASE  
S PERFORM DIAGNOSTICS  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S USE FREQUENCY COUNTER  
S USE FRTS  
S USE MULTIMETER  
S USE OSCILLOSCOPE  
S USE SIGNAL GENERATOR  
S USE SPECTRUM ANALYZER

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY AC MOTOR THEORY OF OPERATION  
K APPLY BASIC RF PRINCIPLES

## KNOWLEDGE:

- K APPLY CMOS THEORY OF OPERATION
- K APPLY COMBINATIONAL LOGIC CIRCUIT THEORY OF OPERATION
- K APPLY COMPUTER PERIPHERAL DEVICE THEORY OF OPERATION
- K APPLY COMPUTER THEORY OF OPERATION
- K APPLY DISPLAY TUBE THEORY OF OPERATION
- K APPLY ESD PRECAUTIONS
- K APPLY FLIP-FLOP THEORY OF OPERATION
- K APPLY FREQUENCY SENSITIVE FILTER THEORY OF OPERATION
- K APPLY INTEGRATED CIRCUIT THEORY OF OPERATION
- K APPLY LED THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT COUNTER THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT REGISTER THEORY OF OPERATION
- K APPLY MAIN LOGIC GATE THEORY OF OPERATION
- K APPLY MICROPROCESSOR THEORY OF OPERATION
- K APPLY MICROWAVE OSCILLATOR OR AMPLIFIER THEORY OF OPERATION
- K APPLY OPERATIONAL AMPLIFIER THEORY OF OPERATION
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY PHOTOSENSITIVE DEVICE THEORY OF OPERATION
- K APPLY PIN DIODE THEORY OF OPERATION
- K APPLY POWER SUPPLY THEORY OF OPERATION
- K APPLY PROGRAMMABLE D/A CONVERTER THEORY OF OPERATION
- K APPLY RELAY THEORY OF OPERATION
- K APPLY SCR THEORY OF OPERATION
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY SOLID STATE DIODE THEORY OF OPERATION
- K APPLY SPEAKER THEORY OF OPERATION
- K APPLY TECHNICAL DATA
- K APPLY TRANSISTOR AMPLIFIER CIRCUIT THEORY OF OPERATION
- K APPLY TTL THEORY OF OPERATION
- K APPLY TUNNEL DIODE THEORY OF OPERATION
- K APPLY VOLTAGE REGULATOR THEORY OF OPERATION
- K APPLY ZENER DIODE THEORY OF OPERATION
- K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING
- K DETERMINE STATUS OF DESICCANT
- K DETERMINE WHETHER MALFUNCTION IS IN TEST STATION, LRU, OR ADAPTER (TASK NUMBER: 61360)
- K INTERPRET INTEGRATED CIRCUIT SPECIFICATIONS
- K ISOLATE FAULTY AC MOTORS
- K ISOLATE FAULTY CMOSs
- K ISOLATE FAULTY COMBINATIONAL LOGIC CIRCUITS
- K ISOLATE FAULTY COMPUTER MAJOR UNITS
- K ISOLATE FAULTY COMPUTER PERIPHERAL DEVICES
- K ISOLATE FAULTY COMPUTER SUBASSEMBLIES
- K ISOLATE FAULTY COOLANT PUMPS
- K ISOLATE FAULTY DISPLAY TUBES
- K ISOLATE FAULTY FLIP-FLOPS
- K ISOLATE FAULTY FREQUENCY SENSITIVE FILTERS
- K ISOLATE FAULTY INTEGRATED CIRCUITS
- K ISOLATE FAULTY LOGIC COUNTERS
- K ISOLATE FAULTY MAIN LOGIC GATES
- K ISOLATE FAULTY MICROPROCESSORS
- K ISOLATE FAULTY MICROWAVE OSCILLATORS OR AMPLIFIERS
- K ISOLATE FAULTY OPERATIONAL AMPLIFIERS

**KNOWLEDGE:**

K ISOLATE FAULTY PHOTOSENSITIVE DEVICES  
 K ISOLATE FAULTY POWER SUPPLIES  
 K ISOLATE FAULTY REGISTER LOGIC CIRCUITS  
 K ISOLATE FAULTY RELAYS  
 K ISOLATE FAULTY SOLID STATE DIODES  
 K ISOLATE FAULTY SPEAKERS  
 K ISOLATE FAULTY TRANSISTOR AMPLIFIER CIRCUITS  
 K ISOLATE FAULTY TTLS  
 K ISOLATE MALFUNCTIONS IN TEST STATION THROUGH INTERCONNECTS OF AN INSTALLED LRU (TASK NUMBER: 61370)  
 K PERFORM BINARY CONVERSIONS  
 K PERFORM HEXADECIMAL CONVERSIONS  
 K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)  
 K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
 K TROUBLESHOOT CMOS LOGIC FAMILIES  
 K TROUBLESHOOT COMPUTER MAJOR UNITS  
 K TROUBLESHOOT COMPUTER PERIPHERAL DEVICES  
 K TROUBLESHOOT COMPUTER SUBASSEMBLIES OR CIRCUITS  
 K TROUBLESHOOT MICROPROCESSOR-CONTROLLED SYSTEMS  
 K TROUBLESHOOT MICROWAVE OSCILLATORS AND AMPLIFIERS  
 K TROUBLESHOOT TRANSISTOR AMPLIFIER CIRCUITS  
 K TROUBLESHOOT TTL LOGIC FAMILIES  
 K UTILIZE SCHEMATIC AND BLOCK DIAGRAMS  
 K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | Y1308         |            | 0          | 0          | 0        | 2        | 6.36       |     |
| 451X6B | Y1308         |            | 4          | 1          | 6        | 2        | 6.36       |     |
| 451X6  | Y1308         |            | 2          | 1          | 3        | 2        | 6.36       |     |
| 451X6A | Y1314         |            | 0          | 0          | 1        | 2        | 5.55       |     |
| 451X6B | Y1314         |            | 19         | 8          | 9        | 2        | 5.55       |     |
| 451X6  | Y1314         |            | 8          | 4          | 5        | 2        | 5.55       |     |
| 451X6A | Y1315         |            | 0          | 0          | 1        | 4        | 6.64       |     |
| 451X6B | Y1315         |            | 19         | 8          | 10       | 4        | 6.64       |     |
| 451X6  | Y1315         |            | 8          | 5          | 5        | 4        | 6.64       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
 Y1308 ISOLATE MALFUNCTIONS IN AN/ALM-126C SASE TEST STATIONS  
 Y1314 ISOLATE MALFUNCTIONS IN ECM POD COLDPLATE LIQUID COOLER (PCLC) SYSTEMS  
 Y1315 ISOLATE MALFUNCTIONS IN ECM POD TEST STATIONS

**TASK NUMBER:** 61040

**TASK STATEMENT:** .

REPAIR SASE

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES  
COOLANT  
CTK  
ESD PROTECTIVE EQUIPMENT  
TORQUE WRENCH

**REFERENCES:**

33D7-13-66-21  
33D7-13-66-21-2  
APPLICABLE IPB

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN AN/ALM-126C SASE (Y1296)  
A ALIGN SRUs  
A CALIBRATE SASE  
A CLEAN CONTACTS (F 210)  
A ORDER PARTS  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE DESICCANT  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)  
A REMOVE AND REPLACE TRUs (TASK NUMBER: 61380)  
A REPAIR WIRING (TASK NUMBER: 61440)  
A RESEAT SRUs

**SKILLS:**

S ADD COOLANT  
S OPERATE SASE  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S USE TORQUE WRENCH

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY ESD PRECAUTIONS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | Y1296         |            | 0          | 0          | 0        | 2        | 6.16       |     |
| 451X6B | Y1296         |            | 8          | 2          | 5        | 2        | 6.16       |     |
| 451X6  | Y1296         |            | 3          | 2          | 2        | 2        | 6.16       |     |
| 451X6A | Y1299         |            | 0          | 0          | 1        | 2        | 6.20       |     |
| 451X6B | Y1299         |            | 8          | 5          | 8        | 2        | 6.20       |     |
| 451X6  | Y1299         |            | 3          | 3          | 4        | 2        | 6.20       |     |
| 451X6A | Y1301         |            | 0          | 0          | 0        | 2        | 5.90       |     |
| 451X6B | Y1301         |            | 4          | 2          | 3        | 2        | 5.90       |     |
| 451X6  | Y1301         |            | 2          | 2          | 1        | 2        | 5.90       |     |
| 451X6A | Y1302         |            | 0          | 0          | 0        | 1        | 5.79       |     |
| 451X6B | Y1302         |            | 0          | 0          | 2        | 1        | 5.79       |     |
| 451X6  | Y1302         |            | 0          | 1          | 1        | 1        | 5.79       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
Y1296 ALIGN AN/ALM-126C SEMIAUTOMATIC SUPPORT EQUIPMENT (SASE)  
Y1299 ALIGN FREQUENCY RESPONSE TEST SETS (FRTS)  
Y1301 ALIGN SASE SPECTRUM ANALYZERS  
Y1302 ALIGN SIGNAL CONDITIONING ASSEMBLIES

**TASK NUMBER:** 61050

**TASK STATEMENT:**

MAINTAIN SASE DISKS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

DISK  
SASE  
SYSTEM TAPE CARTRIDGE  
UTILITY PROGRAM

**REFERENCES:**

33D7-13-66-21

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A INITIALIZE DISK  
A DUPLICATE DISKS (Y1304)  
A EXECUTE CHECKSUMS  
A EDIT DISKS (Y1306)

**SKILLS:**

S INSTALL CARTRIDGE  
S INSTALL DISKS  
S OPERATE SASE (AN/ALM-126C)  
S USE CHECKSUMS TO VERIFY CHANGED DATA IS CORRECT  
S USE UTILITY PROGRAM TO EDIT DISKS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K DETERMINE FILES THAT MAKE UP DATA DISK  
K DETERMINE VARIOUS PROGRAMS THAT CAN BE USED FOR EDITING

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | Y1304         |            | 0          | 0          | 0        | 3        | 4.63       |     |
| 451X6B | Y1304         |            | 8          | 4          | 7        | 3        | 4.63       |     |
| 451X6  | Y1304         |            | 3          | 2          | 4        | 3        | 4.63       |     |
| 451X6A | Y1306         |            | 0          | 0          | 0        | 2        | 5.63       |     |
| 451X6B | Y1306         |            | 4          | 1          | 4        | 2        | 5.63       |     |
| 451X6  | Y1306         |            | 2          | 1          | 2        | 2        | 5.63       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

Y1304 DUPLICATE DISKS  
Y1306 EDIT DISKS

**TASK NUMBER:** 61060

**TASK STATEMENT:** .

PERFORM OPERATIONAL TESTS OF QRC 80-01 ECM PODS (Y1331)

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

28VDC POWER SUPPLY  
81B-QRC 8001/POD-U001-00A  
81B-QRC 8001/POD-U002-00A  
81B-QRC 8001/POD-U003-00A  
ALIGNMENT TOOLS  
CONTROL BOX TESTER  
CTK  
DIGITAL MULTIMETER  
FRTS  
HOIST  
HVPS TEST SET  
LIFTING BARS (FORWARD AND AFT PYLONS)  
LUG BAR  
OSCILLOSCOPE  
PYLON INTERFACE BOX  
SASE  
STORAGE RACK  
TORQUE WRENCH  
WORKBENCH

**REFERENCES:**

12P3-5QRC-80-12-2 (CONFIDENTIAL)  
12P3-5QRC-80-12-1 (CONFIDENTIAL)  
12P3-2ALQ-122  
1F-111D-4-20  
LOCAL CHECKLIST  
TACTICAL EW EQUIPMENT  
SETTINGS HANDBOOK

**CONDITIONS:**

2 PERSON REQUIREMENT

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR; PMI; FUNCTIONAL CHECK

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

- A INSTALL POD ON WORKBENCH
- A PERFORM PMI
- A PERFORM OPERATIONAL TESTS CHECKOUT OF QRC 80-01 CONTROL BOXES (Y1328)
- A PERFORM SCA MANUAL MODE HAT CHECK
- A PERFORM OPERATIONAL TEST OF POWER SUPPLIES
- A REMOVE AND INSTALL PANELS
- A REMOVE AND INSTALL PYLON

**SKILLS:**

- S ATTACH BARS TO PODS
- S CONNECT ADAPTER AND CABLES
- S CONNECT COOLANT LINES
- S LOAD DISKS
- S OPERATE SASE (AN/ALM-126C)
- S PERFORM VISUAL INSPECTIONS
- S SPIN POD
- S USE 28VDC POWER SUPPLY
- S USE ALIGNMENT TOOLS
- S USE COMMON HANDTOOLS
- S USE CONTROL BOX TESTER TO APPLY POWER TO POD
- S USE DIGITAL MULTIMETER TO MEASURE DC VOLTAGES
- S USE FRTS
- S USE HOIST TO LIFT POD
- S USE HVPS TEST SET
- S USE OSCILLOSCOPE TO MEASURE DC VOLTAGE NOISE
- S USE PYLON INTERFACE BOX
- S USE TORQUE WRENCH
- S USE WORKBENCH TO HOLD POD IN PLACE

**KNOWLEDGE:**

- K ANNOTATE FORMS
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY PROPER CARE OF DISKS
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY TECHNICAL DATA
- K APPLY VOLTAGE DIVIDER THEORY OF OPERATION
- K DETERMINE JAMMING TECHNIQUES REQUIRED
- K DETERMINE OPERATING FREQUENCIES
- K DETERMINE WHICH MATRIX NEEDS TO BE EXECUTED
- K FOLLOW INFORMATION PRESENTED ON SCREEN

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | Y1328         |            | 0          | 0          | 0        | 2        | 4.49       |     |
| 451X6B | Y1328         |            | 8          | 2          | 7        | 2        | 4.49       |     |
| 451X6  | Y1328         |            | 3          | 2          | 3        | 2        | 4.49       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | Y1329         |            | 0          | 0          | 0        | 2        | 5.07       |     |
| 451X6B | Y1329         |            | 8          | 2          | 7        | 2        | 5.07       |     |
| 451X6  | Y1329         |            | 3          | 2          | 3        | 2        | 5.07       |     |
| 451X6A | Y1330         |            | 0          | 0          | 0        | 2        | 5.97       |     |
| 451X6B | Y1330         |            | 8          | 4          | 7        | 2        | 5.97       |     |
| 451X6  | Y1330         |            | 3          | 2          | 3        | 2        | 5.97       |     |
| 451X6A | Y1331         |            | 0          | 0          | 0        | 2        | 5.66       |     |
| 451X6B | Y1331         |            | 8          | 4          | 7        | 2        | 5.66       |     |
| 451X6  | Y1331         |            | 3          | 2          | 3        | 2        | 5.66       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

Y1328 PERFORM OPERATIONAL TESTS OF QRC 80-01 CONTROL BOXES  
Y1329 PERFORM OPERATIONAL TESTS OF QRC 80-01 ECM POD COOLING  
SYSTEMS  
Y1330 PERFORM OPERATIONAL TESTS OF QRC 80-01 ECM POD POWER  
SUPPLIES  
Y1331 PERFORM OPERATIONAL TESTS OF QRC 80-01 ECM PODS

**TASK NUMBER:** 61070

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN QRC 80-01 ECM PODS (Y1317)

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

81B-QRC 8001/POD-U001-00A  
81B-QRC 8001/POD-U002-00A  
81B-QRC 8001/POD-U003-00A  
81B-QRC 8001/TST-T001-008  
CTK  
ESD PROTECTIVE EQUIPMENT  
FRTS  
FREQUENCY COUNTER  
HY-POT TEST STAND  
MULTIMETER  
OSCILLOSCOPE  
SASE  
SIGNAL GENERATOR  
SPECTRUM ANALYZER

**REFERENCES:**

12P3-5QRC-80-12-1 (CONFIDENTIAL)  
12P3-5QRC-80-12-2 (CONFIDENTIAL)  
12P3-5QRC-80-12-2-1 (CONFIDENTIAL)  
12P3-5QRC-80-12-3 (CONFIDENTIAL)

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A PERFORM HY-POT TESTS OF ECM TWTs (Y1318)  
A DETECT LEAKS  
A PERFORM TRANSMISSION LINE MEASUREMENTS

**SKILLS:**

S LOAD DISKS  
S OPERATE SASE (AN/ALM-126C)  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S USE FREQUENCY COUNTER

**SKILLS:**

S USE FRTS  
S USE HY-POT TEST STAND  
S USE MULTIMETER TO MEASURE CONTINUITY AND VOLTAGE  
S USE OSCILLOSCOPE  
S USE SIGNAL GENERATOR  
S USE SPECTRUM ANALYZER

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY ESD PRECAUTIONS  
K APPLY FLIP-FLOP THEORY OF OPERATION  
K APPLY FREQUENCY SENSITIVE FILTER THEORY OF OPERATION  
K APPLY MAIN LOGIC GATE THEORY OF OPERATION  
K APPLY MICROWAVE OSCILLATOR OR AMPLIFIER THEORY OF OPERATION  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY PIN DIODE THEORY  
K APPLY POWER SUPPLY FILTER THEORY OF OPERATION  
K APPLY PROPER CARE OF DISKS  
K APPLY RELAY THEORY OF OPERATION  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY SOLID STATE DIODE THEORY OF OPERATION  
K APPLY QRC 80-01 ECM POD SYSTEM THEORY OF OPERATION  
K APPLY TECHNICAL DATA  
K APPLY TRANSMISSION LINE THEORY OF OPERATION  
K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING  
K FOLLOW INFORMATION PRESENTED ON SCREEN  
K ISOLATE FAULTY ANTENNAS  
K ISOLATE FAULTY FLIP-FLOPS  
K ISOLATE FAULTY FREQUENCY SENSITIVE FILTERS  
K ISOLATE FAULTY MAIN LOGIC GATES  
K ISOLATE FAULTY MICROWAVE OSCILLATORS OR AMPLIFIERS  
K ISOLATE FAULTY POWER SUPPLY FILTERS  
K ISOLATE FAULTY RELAYS  
K ISOLATE FAULTY RESONANT CAVITIES  
K ISOLATE FAULTY SOLID STATE DIODES  
K ISOLATE FAULTY TRANSMISSION LINES  
K ISOLATE FAULTY WAVEGUIDES  
K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)  
K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | Y1317         |            | 0          | 0          | 0        | 2        | 7.30       |     |
| 451X6B | Y1317         |            | 8          | 2          | 6        | 2        | 7.30       |     |
| 451X6  | Y1317         |            | 3          | 2          | 3        | 2        | 7.30       |     |
| 451X6A | Y1318         |            | 0          | 0          | 1        | 4        | 5.44       |     |
| 451X6B | Y1318         |            | 23         | 12         | 13       | 4        | 5.44       |     |
| 451X6  | Y1318         |            | 9          | 6          | 6        | 4        | 5.44       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
Y1317 ISOLATE MALFUNCTIONS IN QRC 80-01 ECM PODS  
Y1318 PERFORM HY-POT TESTS OF ECM TRAVELING WAVE TUBES

**TASK NUMBER:** 61080

**TASK STATEMENT:**

REPAIR QRC 80-01 ECM PODS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

81B-QRC 8001/POD-U001-00A  
81B-QRC 8001/POD-U002-00A  
81B-QRC 8001/POD-U003-00A  
81B-QRC 8001/TST-T001-008  
CLEANING SOLVENTS AND BRUSHES  
CTK  
ESD PROTECTIVE EQUIPMENT  
FORCED AIR  
FREQUENCY COUNTER  
FRTS  
MULTIMETER  
OSCILLOSCOPE  
PRESSURE GAUGE  
SASE  
SIGNAL GENERATOR  
SPECTRUM ANALYZER  
ULTRASONIC CLEANER  
VACUUM FILL UNIT

**REFERENCES:**

12P3-5QRC80-12-1 (CONFIDENTIAL)  
12P3-5QRC80-12-2 (CONFIDENTIAL)  
12P3-5QRC80-12-14

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN QRC 80-01 ECM PODS (Y1300)  
A CHANGE LUGS  
A CLEAN CONTACTS (F 210)  
A MEASURE DENT DEPTH AND AREA SIZE  
A ORDER PARTS  
A REMOVE AND REPLACE 'O' RINGS  
A REMOVE AND REPLACE HARDLINES  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)  
A REPAIR COOLANT LEAKS  
A REPAIR WIRING (TASK NUMBER: 61440)

**ACTIVITIES:**

- A REPLACE HEAT EXCHANGERS
- A SERVICE QRC 80-01 ECM POD ACCUMULATORS (Y1343)
- A TUNE OR ADJUST MICROWAVE OSCILLATORS OR AMPLIFIERS

**SKILLS:**

- S CONNECT COOLANT LINES
- S OPERATE SASE
- S PERFORM VISUAL INSPECTION
- S READ FLOW METER
- S USE COMMON HANDTOOLS
- S USE FORCED AIR TO CLEAN FILTERS
- S USE FREQUENCY COUNTER
- S USE FRTS
- S USE HARMONIZATION MODE ON CPINs
- S USE MULTIMETER
- S USE OSCILLOSCOPE
- S USE PRESSURE GAUGE TO MEASURE RESERVOIR PRESSURE
- S USE SIGNAL GENERATOR
- S USE SPECTRUM ANALYZER
- S USE ULTRASONIC CLEANER TO CLEAN FILTERS
- S USE VACUUM FILL UNIT TO ADD COOLANT

**KNOWLEDGE:**

- K ANNOTATE FORMS
- K APPLY BASIC MATH PRINCIPLES TO DETERMINE AREA
- K APPLY BASIC RF PRINCIPLES
- K APPLY ESD PRECAUTIONS
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY PROPER CARE OF DISKS
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | Y1300         |            | 0          | 0          | 0        | 2        | 6.52       |     |
| 451X6B | Y1300         |            | 8          | 4          | 7        | 2        | 6.52       |     |
| 451X6  | Y1300         |            | 3          | 2          | 3        | 2        | 6.52       |     |
| 451X6A | Y1343         |            | 0          | 0          | 0        | 2        | 5.58       |     |
| 451X6B | Y1343         |            | 4          | 1          | 4        | 2        | 5.58       |     |
| 451X6  | Y1343         |            | 2          | 1          | 2        | 2        | 5.58       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

- F 210 CLEAN CONTACTS
- Y1300 ALIGN QRC 80-01 ECM PODS
- Y1343 SERVICE QRC 80-01 ECM POD ACCUMULATORS

**TASK NUMBER:** 61090

**TASK STATEMENT:** .

PROGRAM ECM PODS FOR MISSION REQUIREMENTS (Y1335)

**TASK NOTES:**

PREVIOUSLY ACCOMPLISHED BY AFSC 328XX

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

A-FRAME POD HANDLING FIXTURE  
AN/ALM-187 ECM POD TEST STATION  
CTK  
ECM POD INDOOR COOLING UNIT  
ECM POD MLV  
FREQUENCY COUNTER  
POD CRADLE AND DOLLY  
POD HOIST AND BAR  
SIGNAL GENERATOR  
SPECTRUM ANALYZER

**REFERENCES:**

12D-2ALQ131-1-1  
12D3-2ALQ131-12-1

**CONDITIONS:**

2 PERSON REQUIREMENT

**CUES:**

CHANGE REQUIRED IN MISSION TAPE OR BLUE TAPE; MODIFY  
COUNTERMEASURES PROGRAM

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A UPLOAD POD  
A INITIALIZE SOFTWARE

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S OPERATE TEST STATION  
S USE A-FRAME POD HANDLING FIXTURE  
S USE COMMON HANDTOOLS  
S USE ECM POD INDOOR COOLANT UNIT  
S USE ECM POD MLV  
S USE FREQUENCY COUNTER TO MEASURE FREQUENCY OF JAM PACKAGE  
S USE HOIST AND BAR TO LIFT POD  
S USE POD DOLLY AND CRADLE  
S USE SIGNAL GENERATOR TO SIMULATE RADAR THREAT  
S USE SPECTRUM ANALYZER TO LOOK AT OUTPUT OF POD

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K FOLLOW OPTIONS ON MAIN MENU

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | Y1335         |            | 0          | 0          | 0        | 3        | 5.48       |     |
| 451X6B | Y1335         |            | 19         | 8          | 10       | 3        | 5.48       |     |
| 451X6  | Y1335         |            | 8          | 4          | 5        | 3        | 5.48       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

Y1335 PROGRAM ECM PODS FOR MISSION REQUIREMENTS

**TASK NUMBER:** 61100

**TASK STATEMENT:**

PERFORM CONFIDENCE AND COMPREHENSIVE PERIODIC SELF-TESTS OF THE  
AN/ALM-204 TEST STATION (Z1352)

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

SELF-TEST DISK

**REFERENCES:**

33D7-38-120-1

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR; WEEKLY (CONFIDENCE)

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

- A INSTALL DISK
- A EXECUTE TEST

**SKILLS:**

- S CONNECT ADAPTER AND CABLES
- S LOAD COMPUTER PROGRAM
- S OPERATE TEST STATION

**KNOWLEDGE:**

- K ANNOTATE FORMS
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY TECHNICAL DATA
- K DETERMINE WHICH PART OF SELF-TEST TO EXECUTE
- K FOLLOW INFORMATION PRESENTED ON SCREEN

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | Z1352         |            | 0          | 0          | 0        | 3        | 5.99       |     |
| 451X6B | Z1352         |            | 0          | 9          | 12       | 3        | 5.99       |     |
| 451X6  | Z1352         |            | 0          | 5          | 6        | 3        | 5.99       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

Z1352 PERFORM CONFIDENCE AND COMPREHENSIVE PERIODIC SELF-TESTS OF  
AN/ALM-204 TEST STATIONS

**TASK NUMBER:** 61110

**TASK STATEMENT:** .

ISOLATE MALFUNCTIONS IN THE AN/ALM-204 TEST STATION

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
DISK DRIVE MAINTENANCE KIT  
ESD PROTECTIVE EQUIPMENT  
EXTENDER BOARDS  
FREQUENCY COUNTER  
OSCILLOSCOPE  
SIGNAL GENERATOR  
SPECTRUM ANALYZER  
TEST PROBES

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
ATLAS PROGRAMMING MANUAL

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A PERFORM CONFIDENCE AND COMPREHENSIVE PERIODIC SELF-TEST OF  
AN/ALM-204 TEST STATION (TASK NUMBER: 61100)

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S INSTALL EXTENDER BOARDS  
S LOAD COMPUTER PROGRAMS  
S MEASURE TRANSMISSION POWER  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S USE DISK DRIVE MAINTENANCE KIT TO TROUBLESHOOT

## **SKILLS:**

- S USE FREQUENCY COUNTER
- S USE MULTIMETER
- S USE OSCILLOSCOPE
- S USE PROBES TO CHECK SIGNALS
- S USE SIGNAL GENERATOR
- S USE SPECTRUM ANALYZER

## **KNOWLEDGE:**

- K ANNOTATE FORMS
- K APPLY AC CIRCUIT THEORY OF OPERATION
- K APPLY AC MOTOR THEORY OF OPERATION
- K APPLY AM MODULATION TRANSMITTER THEORY OF OPERATION
- K APPLY AM RECEIVER THEORY OF OPERATION
- K APPLY APPROXIMATION A/D CONVERTER THEORY OF OPERATION
- K APPLY BIPOLAR JUNCTION TRANSISTOR THEORY OF OPERATION
- K APPLY CAPACITOR THEORY OF OPERATION
- K APPLY CHOPPER (SYNCHROUS VIBRATOR) THEORY OF OPERATION
- K APPLY CLAMPER CIRCUIT THEORY OF OPERATION
- K APPLY CMOS THEORY OF OPERATION
- K APPLY COMBINATIONAL LOGIC CIRCUIT THEORY OF OPERATION
- K APPLY COMPUTER THEORY OF OPERATION
- K APPLY CRT THEORY OF OPERATION
- K APPLY DC CIRCUIT THEORY OF OPERATION
- K APPLY DISPLAY TUBE THEORY OF OPERATION
- K APPLY ESD PRECAUTIONS
- K APPLY FLIP-FLOP THEORY OF OPERATION
- K APPLY FM RECEIVER THEORY OF OPERATION
- K APPLY FM TRANSMITTER THEORY OF OPERATION
- K APPLY INDUCTOR THEORY OF OPERATION
- K APPLY INTEGRATED CIRCUIT THEORY OF OPERATION
- K APPLY JFET THEORY OF OPERATION
- K APPLY LCD THEORY OF OPERATION
- K APPLY LED THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT ZENER DIODE THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT COUNTER THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT REGISTER THEORY OF OPERATION
- K APPLY MAIN LOGIC GATE THEORY OF OPERATION
- K APPLY METER MOVEMENT THEORY OF OPERATION
- K APPLY MICROPROCESSOR THEORY OF OPERATION
- K APPLY MICROWAVE OSCILLATOR OR AMPLIFIER THEORY OF OPERATION
- K APPLY MOSFET THEORY OF OPERATION
- K APPLY MULTIVIBRATOR CIRCUIT THEORY OF OPERATION
- K APPLY OPERATIONAL AMPLIFIER THEORY OF OPERATION
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY OSCILLATOR CIRCUIT THEORY OF OPERATION
- K APPLY POWER SUPPLY FILTER THEORY OF OPERATION
- K APPLY POWER SUPPLY RECTIFIER THEORY OF OPERATION
- K APPLY POWER SUPPLY THEORY OF OPERATION
- K APPLY PULSE MODULATION RECEIVER THEORY OF OPERATION
- K APPLY PULSE MODULATION TRANSMITTER THEORY OF OPERATION

## KNOWLEDGE:

K APPLY RAMP A/D CONVERTER THEORY OF OPERATION  
K APPLY RCL CIRCUIT THEORY OF BASIC OPERATION  
K APPLY RCL CIRCUIT THEORY OF RESONANT OPERATION  
K APPLY RELAY THEORY OF OPERATION  
K APPLY RESISTOR THEORY OF OPERATION  
K APPLY RESONANT CAVITY THEORY OF OPERATION  
K APPLY SCR THEORY OF OPERATION  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY SINGLE SIDEBAND RECEIVER THEORY OF OPERATION  
K APPLY SINGLE SIDEBAND TRANSMITTER THEORY OF OPERATION  
K APPLY SOLID STATE DIODE THEORY OF OPERATION  
K APPLY SYNCHRO-SERVO THEORY OF OPERATION  
K APPLY TECHNICAL DATA  
K APPLY THEORY OF OPERATION OF COMPUTER MEMORIES  
K APPLY THREE-PHASE TRANSFORMER THEORY OF OPERATION  
K APPLY TRANSDUCER THEORY OF OPERATION  
K APPLY TRANSFORMER THEORY OF OPERATION  
K APPLY TRANSISTOR AMPLIFIER COUPLING CIRCUIT THEORY OF OPERATION  
K APPLY TRANSISTOR AMPLIFIER CIRCUIT THEORY OF OPERATION  
K APPLY TRANSISTOR AMPLIFIER STABILIZATION CIRCUIT THEORY OF OPERATION  
K APPLY TRANSMISSION LINE THEORY OF OPERATION  
K APPLY TTL THEORY OF OPERATION  
K APPLY TUNNEL DIODE THEORY OF OPERATION  
K APPLY VOLTAGE REGULATOR THEORY OF OPERATION  
K APPLY WAVEGUIDE THEORY OF OPERATION  
K APPLY WAVESHAPING CIRCUIT THEORY OF OPERATION  
K APPLY WEIGHTED RESISTOR D/A CONVERTER THEORY OF OPERATION  
K APPLY ZENER DIODE THEORY OF OPERATION  
K DETERMINE TEST STATION MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING  
K DETERMINE WHETHER MALFUNCTION IS IN TEST STATION, LRU, OR ADAPTER (TASK NUMBER: 61360)  
K INTERPRET BIPOLAR JUNCTION TRANSISTOR SPECIFICATIONS  
K INTERPRET INTEGRATED CIRCUIT SPECIFICATIONS  
K INTERPRET RESISTOR COLOR CODES  
K INTERPRET SOLID STATE DIODE COLOR CODES  
K INTERPRET SOLID STATE DIODE SPECIFICATIONS  
K ISOLATE FAULTY AC MOTORS  
K ISOLATE FAULTY AM RECEIVERS  
K ISOLATE FAULTY AM TRANSMITTERS  
K ISOLATE FAULTY APPROXIMATION A/D CONVERTERS  
K ISOLATE FAULTY BIPOLAR JUNCTION TRANSISTORS  
K ISOLATE FAULTY CAPACITORS  
K ISOLATE FAULTY CHOPPERS (SYNCHRONOUS VIBRATORS)  
K ISOLATE FAULTY CLAMPER CIRCUITS  
K ISOLATE FAULTY CMOSs  
K ISOLATE FAULTY COMBINATIONAL LOGIC CIRCUITS  
K ISOLATE FAULTY COMPUTER MEMORIES  
K ISOLATE FAULTY CRTs  
K ISOLATE FAULTY DISPLAY TUBES  
K ISOLATE FAULTY FLIP-FLOPS

## KNOWLEDGE:

K ISOLATE FAULTY FM MODULATION TRANSMITTERS  
K ISOLATE FAULTY FM RECEIVERS  
K ISOLATE FAULTY INDUCTORS  
K ISOLATE FAULTY INTEGRATED CIRCUITS  
K ISOLATE FAULTY JFETs  
K ISOLATE FAULTY LCDs  
K ISOLATE FAULTY LEDs  
K ISOLATE FAULTY LIMITER CIRCUIT DIODES  
K ISOLATE FAULTY LIMITER CIRCUIT ZENER DIODES  
K ISOLATE FAULTY LIMITER TRANSISTOR CIRCUITS  
K ISOLATE FAULTY LOGIC COUNTERS  
K ISOLATE FAULTY MAIN LOGIC GATES  
K ISOLATE FAULTY METER MOVEMENTS  
K ISOLATE FAULTY MICROPROCESSORS  
K ISOLATE FAULTY MICROWAVE OSCILLATORS OR AMPLIFIERS  
K ISOLATE FAULTY MOSFETs  
K ISOLATE FAULTY MULTIVIBRATOR CIRCUITS  
K ISOLATE FAULTY OPERATIONAL AMPLIFIERS  
K ISOLATE FAULTY OSCILLATOR CIRCUITS  
K ISOLATE FAULTY POWER SUPPLIES  
K ISOLATE FAULTY POWER SUPPLY FILTERS  
K ISOLATE FAULTY POWER SUPPLY RECTIFIERS  
K ISOLATE FAULTY PULSE MODULATION RECEIVERS  
K ISOLATE FAULTY PULSE MODULATION TRANSMITTERS  
K ISOLATE FAULTY RAMP A/D CONVERTERS  
K ISOLATE FAULTY RCL CIRCUITS  
K ISOLATE FAULTY REGISTER LOGIC CIRCUITS  
K ISOLATE FAULTY RELAYS  
K ISOLATE FAULTY RESISTORS  
K ISOLATE FAULTY RESONANT CAVITIES  
K ISOLATE FAULTY SCRs  
K ISOLATE FAULTY SINGLE SIDEBAND RECEIVERS  
K ISOLATE FAULTY SINGLE SIDEBAND TRANSMITTERS  
K ISOLATE FAULTY SOLID STATE DIODES  
K ISOLATE FAULTY SYNCHROS-SERVOS  
K ISOLATE FAULTY THREE-PHASE TRANSFORMERS  
K ISOLATE FAULTY TRANSDUCERS  
K ISOLATE FAULTY TRANSFORMERS  
K ISOLATE FAULTY TRANSISTOR AMPLIFIER CIRCUITS  
K ISOLATE FAULTY TRANSISTOR AMPLIFIER COUPLING CIRCUITS  
K ISOLATE FAULTY TRANSISTOR AMPLIFIER STABILIZATION  
K ISOLATE FAULTY TRANSMISSION LINES  
K ISOLATE FAULTY TTLs  
K ISOLATE FAULTY TUNNEL DIODES  
K ISOLATE FAULTY VOLTAGE REGULATORS  
K ISOLATE FAULTY WAVEGUIDES  
K ISOLATE FAULTY WAVESHAPING CIRCUITS  
K ISOLATE FAULTY WEIGHTED RESISTOR D/A CONVERTERS  
K ISOLATE FAULTY ZENER DIODES  
K MANIPULATE ATLAS PROGRAMS  
K PERFORM BASIC AC CIRCUIT CALCULATIONS  
K PERFORM BASIC DC CIRCUIT CALCULATIONS  
K PERFORM BINARY CONVERSIONS

## KNOWLEDGE:

- K PERFORM BINARY MATH OPERATIONS
- K PERFORM HEXADECIMAL CONVERSIONS
- K PERFORM HEXADECIMAL MATH OPERATIONS
- K PERFORM INDUCTOR CALCULATIONS
- K PERFORM OCTAL CONVERSIONS
- K PERFORM OCTAL MATH OPERATIONS
- K PERFORM RCL CIRCUIT CALCULATIONS
- K PERFORM TRANSFORMER CALCULATIONS
- K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)
- K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)
- K TROUBLESHOOT AC CIRCUITS
- K TROUBLESHOOT AC MOTORS
- K TROUBLESHOOT AM RECEIVER CIRCUITS
- K TROUBLESHOOT AM TRANSMITTERS
- K TROUBLESHOOT APPROXIMATION A/D CONVERTERS
- K TROUBLESHOOT BIPOLAR JUNCTION TRANSISTORS
- K TROUBLESHOOT CHOPPERS (SYNCHROUS VIBRATORS)
- K TROUBLESHOOT CLAMPER CIRCUITS
- K TROUBLESHOOT CMOS LOGIC FAMILIES
- K TROUBLESHOOT COMBINATIONAL LOGIC CIRCUITS
- K TROUBLESHOOT COMPUTER MEMORIES
- K TROUBLESHOOT COMPUTER SUBASSEMBLIES OR CIRCUITS
- K TROUBLESHOOT DC CIRCUITS
- K TROUBLESHOOT FLIP-FLOPS
- K TROUBLESHOOT FM MODULATION TRANSMITTERS
- K TROUBLESHOOT FM RECEIVER CIRCUITS
- K TROUBLESHOOT INDUCTORS
- K TROUBLESHOOT LIMITER CIRCUIT DIODES
- K TROUBLESHOOT LIMITER CIRCUIT TRANSISTORS
- K TROUBLESHOOT LIMITER CIRCUIT ZENER DIODES
- K TROUBLESHOOT LOGIC COUNTERS
- K TROUBLESHOOT LOGIC REGISTERS
- K TROUBLESHOOT MAIN LOGIC GATES
- K TROUBLESHOOT METER MOVEMENTS
- K TROUBLESHOOT MICROPROCESSOR-CONTROLLED SYSTEMS
- K TROUBLESHOOT MICROWAVE OSCILLATORS AND AMPLIFIERS
- K TROUBLESHOOT OPERATIONAL AMPLIFIERS
- K TROUBLESHOOT POWER SUPPLY CIRCUITS
- K TROUBLESHOOT POWER SUPPLY FILTERS
- K TROUBLESHOOT POWER SUPPLY RECTIFIERS
- K TROUBLESHOOT PULSE MODULATION RECEIVERS
- K TROUBLESHOOT PULSE MODULATION TRANSMITTERS
- K TROUBLESHOOT RAMP A/D CONVERTERS
- K TROUBLESHOOT RCL CIRCUITS
- K TROUBLESHOOT RELAYS
- K TROUBLESHOOT RESONANT CAVITIES
- K TROUBLESHOOT SINGLE SIDEBAND RECEIVERS
- K TROUBLESHOOT SINGLE SIDEBAND TRANSMITTERS
- K TROUBLESHOOT SYNCHROS-SERVOS
- K TROUBLESHOOT THREE-PHASE TRANSFORMERS
- K TROUBLESHOOT TRANSDUCERS
- K TROUBLESHOOT TRANSFORMERS

**KNOWLEDGE:**

K TROUBLESHOOT TRANSISTOR AMPLIFIER CIRCUITS  
K TROUBLESHOOT TRANSISTOR AMPLIFIER COUPLING CIRCUITS  
K TROUBLESHOOT TRANSISTOR AMPLIFIER STABILIZATION CIRCUITS  
K TROUBLESHOOT TTL LOGIC FAMILIES  
K TROUBLESHOOT VOLTAGE REGULATORS  
K TROUBLESHOOT WAVE GENERATING CIRCUIT MULTIVIBRATORS  
K TROUBLESHOOT WAVE GENERATING CIRCUIT OSCILLATORS  
K TROUBLESHOOT WAVESHAPING CIRCUITS  
K TROUBLESHOOT WEIGHTED RESISTOR D/A CONVERTERS  
K USE COMPUTER PROGRAMMING LANGUAGE  
K USE METRIC NOTATION  
K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
K VERIFY SUSPECTED FAULTY SRUs  
K WRITE ATLAS SUBROUTINES  
K WRITE OR DEBUG COMPUTER PROGRAMS

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | Z1352         |            | 0          | 0          | 0        | 3        | 5.99       |     |
| 451X6B | Z1352         |            | 0          | 9          | 12       | 3        | 5.99       |     |
| 451X6  | Z1352         |            | 0          | 5          | 6        | 3        | 5.99       |     |
| 451X6A | Z1353         |            | 0          | 0          | 0        | 1        | 6.28       |     |
| 451X6B | Z1353         |            | 0          | 8          | 12       | 1        | 6.28       |     |
| 451X6  | Z1353         |            | 0          | 4          | 6        | 1        | 6.28       |     |
| 451X6A | Z1354         |            | 0          | 0          | 0        | 2        | 6.60       |     |
| 451X6B | Z1354         |            | 0          | 11         | 13       | 2        | 6.60       |     |
| 451X6  | Z1354         |            | 0          | 5          | 6        | 2        | 6.60       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
Z1352 PERFORM CONFIDENCE AND COMPREHENSIVE PERIODIC SELF-TESTS OF  
AN/ALM-204 TEST STATIONS  
Z1353 PERFORM FAULT ISOLATION TESTS OF AN/ALM-204 INTERFACE  
DEVICES (ID) AND CABLES  
Z1354 PERFORM FAULT ISOLATION TESTS OF AN/ALM-204 TEST STATION  
SELF-TEST FAILURES

**TASK NUMBER:** 61120

**TASK STATEMENT:**

REPAIR THE AN/ALM-204 TEST STATION

**TASK NOTES:**

THESE TEST STATIONS ARE FOR SUPPORTING THE EF-111

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES  
CTK  
DISK DRIVE MAINTENANCE KIT  
ESD PROTECTIVE EQUIPMENT  
EXTENDER BOARDS  
TORQUE WRENCH

**REFERENCES:**

APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
APPLICABLE IPB

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN AN/ALM-204 TEST STATION TRUs (Z1348)  
A CALIBRATE HPMA (Z1351)  
A CLEAN CONTACTS (F 210)  
A ORDER PARTS  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)  
A REMOVE AND REPLACE TRUs (TASK NUMBER: 61380)  
A REPAIR WIRING (TASK NUMBER: 61440)  
A RESEAT SRUs  
A TUNE OR ADJUST MICROWAVE OSCILLATORS OR AMPLIFIERS  
A TUNE OR ADJUST RESONANT CAVITIES

**SKILLS:**

S INSTALL EXTENDER BOARDS  
 S OPERATE TEST STATION  
 S PERFORM VISUAL INSPECTIONS  
 S USE COMMON HANDTOOLS  
 S USE DISK DRIVE MAINTENANCE KIT TO ALIGN DISK DRIVE  
 S USE TORQUE WRENCH

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY ESD PRECAUTIONS  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | Z1344         |            | 0          | 0          | 0        | 2        | 7.54       |     |
| 451X6B | Z1344         |            | 0          | 8          | 12       | 2        | 7.54       |     |
| 451X6  | Z1344         |            | 0          | 4          | 6        | 2        | 7.54       |     |
| 451X6A | Z1345         |            | 0          | 0          | 0        | 2        | 7.15       |     |
| 451X6B | Z1345         |            | 0          | 6          | 10       | 2        | 7.15       |     |
| 451X6  | Z1345         |            | 0          | 3          | 5        | 2        | 7.15       |     |
| 451X6A | Z1346         |            | 0          | 0          | 0        | 2        | 6.95       |     |
| 451X6B | Z1346         |            | 0          | 8          | 12       | 2        | 6.95       |     |
| 451X6  | Z1346         |            | 0          | 4          | 6        | 2        | 6.95       |     |
| 451X6A | Z1347         |            | 0          | 0          | 0        | 1        | 7.34       |     |
| 451X6B | Z1347         |            | 0          | 9          | 11       | 1        | 7.34       |     |
| 451X6  | Z1347         |            | 0          | 5          | 6        | 1        | 7.34       |     |
| 451X6A | Z1348         |            | 0          | 0          | 0        | 2        | 7.34       |     |
| 451X6B | Z1348         |            | 0          | 9          | 12       | 2        | 7.34       |     |
| 451X6  | Z1348         |            | 0          | 5          | 6        | 2        | 7.34       |     |
| 451X6A | Z1349         |            | 0          | 0          | 0        | 1        | 7.34       |     |
| 451X6B | Z1349         |            | 0          | 9          | 11       | 1        | 7.34       |     |
| 451X6  | Z1349         |            | 0          | 5          | 5        | 1        | 7.34       |     |
| 451X6A | Z1351         |            | 0          | 0          | 0        | 1        | 6.99       |     |
| 451X6B | Z1351         |            | 0          | 9          | 12       | 1        | 6.99       |     |
| 451X6  | Z1351         |            | 0          | 5          | 6        | 1        | 6.99       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
Z1344 ALIGN AN/ALM-204 SYSTRON DONNER GENERATORS  
Z1345 ALIGN AN/ALM-204 TEST PATTERN COMPARATORS  
Z1346 ALIGN AN/ALM-204 TEST STATION POWER SUPPLIES  
Z1347 ALIGN AN/ALM-204 TEST STATION SPECTRUM ANALYZERS  
Z1348 ALIGN AN/ALM-204 TEST STATION TRUs  
Z1349 ALIGN DIGITAL ANALOG CONVERSION (DAC) IN MULTIPLE MATRIX  
SWITCHES (MMS)  
Z1351 CALIBRATE HIGH POWER MICROWAVE ASSEMBLIES (HPMA)

**TASK NUMBER: 61130**

**TASK STATEMENT:**

PERFORM OPERATIONAL TEST OF LRUs THAT RUN ON THE AN/ALM-204 TEST STATION

**TASK NOTES:**

LRUs ARE SOFTWARE CONTROLLED

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
TEST STATION

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR; FUNCTIONAL CHECK

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CALL UP TAPE  
A EXECUTE TEST

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S CONNECT LRU TO TEST STATION  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K FOLLOW INFORMATION DISPLAYED ON CRT

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 243         |            | 61         | 62         | 65       | 39       | 4.32       |     |
| 451X6B | F 243         |            | 50         | 60         | 59       | 39       | 4.32       |     |
| 451X6  | F 243         |            | 55         | 60         | 62       | 39       | 4.32       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 243 PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECTION (T AND I)  
OF LRUs ISSUED FROM SUPPLY

**TASK NUMBER:** 61140

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN LRUs THAT RUN ON THE AN/ALM-204 TEST STATION

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
TEST STATION

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A MEASURE TRANSMISSION POWER  
A PERFORM HY-POT TESTS OF TWT AND A2 ASSEMBLIES IN AN/ALQ-99  
TRANSMITTERS (Z1358)

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S DETECT LEAKS  
S INSTALL EXTENDER BOARDS  
S LOAD COMPUTER PROGRAMS  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS

## KNOWLEDGE:

K ANNOTATE FORMS  
K APPLY AC CIRCUIT THEORY OF OPERATION  
K APPLY AC MOTOR THEORY OF OPERATION  
K APPLY AM MODULATION TRANSMITTER THEORY OF OPERATION  
K APPLY AM RECEIVER THEORY OF OPERATION  
K APPLY APPROXIMATION A/D CONVERTER THEORY OF OPERATION  
K APPLY BIPOLAR JUNCTION TRANSISTOR THEORY OF OPERATION  
K APPLY CAPACITOR THEORY OF OPERATION  
K APPLY CHOPPER (SYNCHROUS VIBRATOR) THEORY OF OPERATION  
K APPLY CLAMPER CIRCUIT THEORY OF OPERATION  
K APPLY CMOS THEORY OF OPERATION  
K APPLY COMBINATIONAL LOGIC CIRCUIT THEORY OF OPERATION  
K APPLY COMPUTER THEORY OF OPERATION  
K APPLY CRT THEORY OF OPERATION  
K APPLY DC CIRCUIT THEORY OF OPERATION  
K APPLY DISPLAY TUBE THEORY OF OPERATION  
K APPLY ELECTRON TUBE AMPLIFIER THEORY OF OPERATION  
K APPLY ELECTRON TUBE THEORY OF OPERATION  
K APPLY FLIP-FLOP THEORY OF OPERATION  
K APPLY FM RECEIVER THEORY OF OPERATION  
K APPLY FM TRANSMITTER THEORY OF OPERATION  
K APPLY INDUCTOR THEORY OF OPERATION  
K APPLY INTEGRATED CIRCUIT THEORY OF OPERATION  
K APPLY JFET THEORY OF OPERATION  
K APPLY LCD THEORY OF OPERATION  
K APPLY LED THEORY OF OPERATION  
K APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATION  
K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION  
K APPLY LIMITER CIRCUIT ZENER DIODE THEORY OF OPERATION  
K APPLY LOGIC CIRCUIT COUNTER THEORY OF OPERATION  
K APPLY LOGIC CIRCUIT REGISTER THEORY OF OPERATION  
K APPLY LRU THEORY OF OPERATION  
K APPLY MAIN LOGIC GATE THEORY OF OPERATION  
K APPLY METER MOVEMENT THEORY OF OPERATION  
K APPLY MICROPROCESSOR THEORY OF OPERATION  
K APPLY MICROWAVE OSCILLATOR OR AMPLIFIER THEORY OF OPERATION  
K APPLY MOSFET THEORY OF OPERATION  
K APPLY MULTIVIBRATOR CIRCUIT THEORY OF OPERATION  
K APPLY OPERATIONAL AMPLIFIER THEORY OF OPERATION  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY OSCILLATOR CIRCUIT THEORY OF OPERATION  
K APPLY POWER SUPPLY FILTER THEORY OF OPERATION  
K APPLY POWER SUPPLY RECTIFIER THEORY OF OPERATION  
K APPLY POWER SUPPLY THEORY OF OPERATION  
K APPLY PULSE MODULATION RECEIVER THEORY OF OPERATION  
K APPLY PULSE MODULATION TRANSMITTER THEORY OF OPERATION  
K APPLY RAMP A/D CONVERTER THEORY OF OPERATION  
K APPLY RCL CIRCUIT THEORY OF BASIC OPERATION  
K APPLY RCL CIRCUIT THEORY OF RESONANT OPERATION  
K APPLY RELAY THEORY OF OPERATION  
K APPLY RESISTOR THEORY OF OPERATION  
K APPLY RESONANT CAVITY THEORY OF OPERATION  
K APPLY SCR THEORY OF OPERATION

## KNOWLEDGE :

K APPLY SHOP SAFETY PROCEDURES  
K APPLY SINGLE SIDEBAND RECEIVER THEORY OF OPERATION  
K APPLY SINGLE SIDEBAND TRANSMITTER THEORY OF OPERATION  
K APPLY SOLID STATE DIODE THEORY OF OPERATION  
K APPLY SYNCHRO-SERVO THEORY OF OPERATION  
K APPLY SYSTEM THEORY OF OPERATION  
K APPLY TECHNICAL DATA  
K APPLY THEORY OF OPERATION OF COMPUTER MEMORIES  
K APPLY THREE-PHASE TRANSFORMER THEORY OF OPERATION  
K APPLY TRANSDUCER THEORY OF OPERATION  
K APPLY TRANSFORMER THEORY OF OPERATION  
K APPLY TRANSISTOR AMPLIFIER COUPLING CIRCUIT THEORY OF OPERATION  
K APPLY TRANSISTOR AMPLIFIER CIRCUIT THEORY OF OPERATION  
K APPLY TRANSISTOR AMPLIFIER STABILIZATION CIRCUIT THEORY OF OPERATION  
K APPLY TRANSMISSION LINE THEORY OF OPERATION  
K APPLY TTL THEORY OF OPERATION  
K APPLY TUNNEL DIODE THEORY OF OPERATION  
K APPLY VOLTAGE REGULATOR THEORY OF OPERATION  
K APPLY WAVEGUIDE THEORY OF OPERATION  
K APPLY WAVESHAPING CIRCUIT THEORY OF OPERATION  
K APPLY WEIGHTED RESISTOR D/A CONVERTER THEORY OF OPERATION  
K APPLY ZENER DIODE THEORY OF OPERATION  
K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING  
K DETERMINE WHETHER MALFUNCTION IS IN TEST STATION, LRU, OR ADAPTER (TASK NUMBER: 61360)  
K INTERPRET BIPOLAR JUNCTION TRANSISTOR SPECIFICATIONS  
K INTERPRET ELECTRON TUBE SPECIFICATIONS  
K INTERPRET INTEGRATED CIRCUIT SPECIFICATIONS  
K INTERPRET RESISTOR COLOR CODES  
K INTERPRET SOLID STATE DIODE COLOR CODES  
K INTERPRET SOLID STATE DIODE SPECIFICATIONS  
K ISOLATE FAULTY AC MOTORS  
K ISOLATE FAULTY AM RECEIVERS  
K ISOLATE FAULTY AM TRANSMITTERS  
K ISOLATE FAULTY APPROXIMATION A/D CONVERTERS  
K ISOLATE FAULTY BIPOLAR JUNCTION TRANSISTORS  
K ISOLATE FAULTY CAPACITORS  
K ISOLATE FAULTY CHOPPERS (SYNCHRONOUS VIBRATORS)  
K ISOLATE FAULTY CLAMPER CIRCUITS  
K ISOLATE FAULTY CMOSs  
K ISOLATE FAULTY COMBINATIONAL LOGIC CIRCUITS  
K ISOLATE FAULTY COMPUTER MEMORIES  
K ISOLATE FAULTY CRT  
K ISOLATE FAULTY DISPLAY TUBES  
K ISOLATE FAULTY ELECTRON TUBE AMPLIFIERS  
K ISOLATE FAULTY ELECTRON TUBES  
K ISOLATE FAULTY FLIP-FLOPS  
K ISOLATE FAULTY FM MODULATION TRANSMITTERS  
K ISOLATE FAULTY FM RECEIVERS  
K ISOLATE FAULTY INDUCTORS  
K ISOLATE FAULTY INTEGRATED CIRCUITS  
K ISOLATE FAULTY JFETs

## KNOWLEDGE:

K ISOLATE FAULTY LCDs  
K ISOLATE FAULTY LEDs  
K ISOLATE FAULTY LIMITER CIRCUIT DIODES  
K ISOLATE FAULTY LIMITER CIRCUIT ZENER DIODES  
K ISOLATE FAULTY LIMITER TRANSISTOR CIRCUITS  
K ISOLATE FAULTY LOGIC COUNTERS  
K ISOLATE FAULTY MAIN LOGIC GATES  
K ISOLATE FAULTY METER MOVEMENTS  
K ISOLATE FAULTY MICROPROCESSORS  
K ISOLATE FAULTY MICROWAVE OSCILLATORS OR AMPLIFIERS  
K ISOLATE FAULTY MOSFETs  
K ISOLATE FAULTY MULTIVIBRATOR CIRCUITS  
K ISOLATE FAULTY OPERATIONAL AMPLIFIERS  
K ISOLATE FAULTY OSCILLATOR CIRCUITS  
K ISOLATE FAULTY POWER SUPPLIES  
K ISOLATE FAULTY POWER SUPPLY FILTERS  
K ISOLATE FAULTY POWER SUPPLY RECTIFIERS  
K ISOLATE FAULTY PULSE MODULATION RECEIVERS  
K ISOLATE FAULTY PULSE MODULATION TRANSMITTERS  
K ISOLATE FAULTY RAMP A/D CONVERTERS  
K ISOLATE FAULTY RCL CIRCUITS  
K ISOLATE FAULTY REGISTER LOGIC CIRCUITS  
K ISOLATE FAULTY RELAYS  
K ISOLATE FAULTY RESISTORS  
K ISOLATE FAULTY RESONANT CAVITIES  
K ISOLATE FAULTY SCRs  
K ISOLATE FAULTY SINGLE SIDEBAND RECEIVERS  
K ISOLATE FAULTY SINGLE SIDEBAND TRANSMITTERS  
K ISOLATE FAULTY SOLID STATE DIODES  
K ISOLATE FAULTY SYNCHROS-SERVOS  
K ISOLATE FAULTY THREE-PHASE TRANSFORMERS  
K ISOLATE FAULTY TRANSDUCERS  
K ISOLATE FAULTY TRANSFORMERS  
K ISOLATE FAULTY TRANSISTOR AMPLIFIER CIRCUITS  
K ISOLATE FAULTY TRANSISTOR AMPLIFIER COUPLING CIRCUITS  
K ISOLATE FAULTY TRANSISTOR AMPLIFIER STABILIZATION CIRCUITS  
K ISOLATE FAULTY TRANSMISSION LINES  
K ISOLATE FAULTY TTLs  
K ISOLATE FAULTY TUNNEL DIODES  
K ISOLATE FAULTY VOLTAGE REGULATORS  
K ISOLATE FAULTY WAVEGUIDES  
K ISOLATE FAULTY WAVESHAPING CIRCUITS  
K ISOLATE FAULTY WEIGHTED RESISTOR D/A CONVERTERS  
K ISOLATE FAULTY ZENER DIODES  
K PERFORM BASIC AC CIRCUIT CALCULATIONS  
K PERFORM BASIC DC CIRCUIT CALCULATIONS  
K PERFORM BINARY CONVERSIONS  
K PERFORM BINARY MATH OPERATIONS  
K PERFORM HEXADECIMAL CONVERSIONS  
K PERFORM HEXADECIMAL MATH OPERATIONS  
K PERFORM INDUCTOR CALCULATIONS  
K PERFORM OCTAL CONVERSIONS  
K PERFORM OCTAL MATH OPERATIONS

## KNOWLEDGE:

- K PERFORM RCL CIRCUIT CALCULATIONS
- K PERFORM TRANSFORMER CALCULATIONS
- K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)
- K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)
- K TROUBLESHOOT AC CIRCUITS
- K TROUBLESHOOT AC MOTORS
- K TROUBLESHOOT AM RECEIVER CIRCUITS
- K TROUBLESHOOT AM TRANSMITTERS
- K TROUBLESHOOT APPROXIMATION A/D CONVERTERS
- K TROUBLESHOOT BIPOLAR JUNCTION TRANSISTORS
- K TROUBLESHOOT CHOPPERS (SYNCHROUS VIBRATORS)
- K TROUBLESHOOT CLAMPER CIRCUITS
- K TROUBLESHOOT CMOS LOGIC FAMILIES
- K TROUBLESHOOT COMBINATIONAL LOGIC CIRCUITS
- K TROUBLESHOOT COMPUTER MEMORIES
- K TROUBLESHOOT COMPUTER SUBASSEMBLIES OR CIRCUITS
- K TROUBLESHOOT DC CIRCUITS
- K TROUBLESHOOT ELECTRON TUBE AMPLIFIERS
- K TROUBLESHOOT FLIP-FLOPS
- K TROUBLESHOOT FM MODULATION TRANSMITTERS
- K TROUBLESHOOT FM RECEIVER CIRCUITS
- K TROUBLESHOOT INDUCTORS
- K TROUBLESHOOT LIMITER CIRCUIT DIODES
- K TROUBLESHOOT LIMITER CIRCUIT TRANSISTORS
- K TROUBLESHOOT LIMITER CIRCUIT ZENER DIODES
- K TROUBLESHOOT LOGIC COUNTERS
- K TROUBLESHOOT LOGIC REGISTERS
- K TROUBLESHOOT MAIN LOGIC GATES
- K TROUBLESHOOT METER MOVEMENTS
- K TROUBLESHOOT MICROPROCESSOR-CONTROLLED SYSTEMS
- K TROUBLESHOOT MICROWAVE OSCILLATORS AND AMPLIFIERS
- K TROUBLESHOOT OPERATIONAL AMPLIFIERS
- K TROUBLESHOOT POWER SUPPLY CIRCUITS
- K TROUBLESHOOT POWER SUPPLY FILTERS
- K TROUBLESHOOT POWER SUPPLY RECTIFIERS
- K TROUBLESHOOT PULSE MODULATION RECEIVERS
- K TROUBLESHOOT PULSE MODULATION TRANSMITTERS
- K TROUBLESHOOT RAMP A/D CONVERTERS
- K TROUBLESHOOT RCL CIRCUITS
- K TROUBLESHOOT RELAYS
- K TROUBLESHOOT RESONANT CAVITIES
- K TROUBLESHOOT SINGLE SIDEBAND RECEIVERS
- K TROUBLESHOOT SINGLE SIDEBAND TRANSMITTERS
- K TROUBLESHOOT SYNCHROS-SERVOS
- K TROUBLESHOOT THREE-PHASE TRANSFORMERS
- K TROUBLESHOOT TRANSDUCERS
- K TROUBLESHOOT TRANSFORMERS
- K TROUBLESHOOT TRANSISTOR AMPLIFIER CIRCUITS
- K TROUBLESHOOT TRANSISTOR AMPLIFIER COUPLING CIRCUITS
- K TROUBLESHOOT TRANSISTOR AMPLIFIER STABILIZATION CIRCUITS
- K TROUBLESHOOT TTL LOGIC FAMILIES
- K TROUBLESHOOT VOLTAGE REGULATOR

**KNOWLEDGE:**

K TROUBLESHOOT WAVE GENERATING CIRCUIT MULTIVIBRATORS  
K TROUBLESHOOT WAVE GENERATING CIRCUIT OSCILLATORS  
K TROUBLESHOOT WAVESHAPING CIRCUITS  
K TROUBLESHOOT WEIGHTED RESISTOR D/A CONVERTERS  
K USE COMPUTER PROGRAMMING LANGUAGE  
K USE METRIC NOTATION  
K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
K VERIFY SUSPECTED FAULTY SRUs  
K WRITE OR DEBUG COMPUTER PROGRAMS

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | Z1358         |            | 0          | 0          | 0        | 2        | 6.18       |     |
| 451X6B | Z1358         |            | 4          | 9          | 12       | 2        | 6.18       |     |
| 451X6  | Z1358         |            | 2          | 5          | 6        | 2        | 6.18       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
Z1358 PERFORM HY-POT TESTS OF TRAVELING WAVE TUBES (TWT) AND A2  
ASSEMBLIES IN AN/ALQ-99 TRANSMITTERS

**TASK NUMBER:** 61150

**TASK STATEMENT:**

REPAIR LRUs THAT RUN ON THE AN/ALM-204 TEST STATION

**TASK NOTES:**

DEAERATION CART IS FOR TRANSMITTER

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES

CTK

DEAERATION CART

DRAIN AND FILL CART

ESD PROTECTIVE EQUIPMENT

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN SRUs

A CLEAN CONTACTS (F 210)

A PERFORM FLUID DEAERATION OF TRANSMITTERS (Z1356)

A ORDER PARTS

A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)

A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)

A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)

A REPAIR WIRING (TASK NUMBER: 61440)

A RESEAT SRUs

A TUNE OR ADJUST MICROWAVE OSCILLATORS OR AMPLIFIERS

A TUNE OR ADJUST RESONANT CAVITIES

**SKILLS:**

S PERFORM VISUAL INSPECTIONS

S USE COMMON HANDTOOLS

S USE DEAERATION CART TO DEAIR TRANSMITTERS

S USE DRAIN AND FILL CART TO REPLACE COOLANT

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY ESD PRECAUTIONS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K SEAT PNEUMATIC HOSES

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | Z1356         |            | 0          | 0          | 0        | 2        | 5.62       |     |
| 451X6B | Z1356         |            | 0          | 8          | 12       | 2        | 5.62       |     |
| 451X6  | Z1356         |            | 0          | 4          | 6        | 2        | 5.62       |     |
| 451X6A | Z1362         |            | 0          | 0          | 0        | 1        | 5.80       |     |
| 451X6B | Z1362         |            | 4          | 8          | 11       | 1        | 5.80       |     |
| 451X6  | Z1362         |            | 2          | 4          | 5        | 1        | 5.80       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
LINE REPLACEABLE UNITS (LRU)  
Z1356 PERFORM FLUID DEAERATION OF TRANSMITTERS  
Z1362 PERFORM OPERATIONAL TESTS OF FLUID DEAERATION CARTS

**TASK NUMBER:** 61160

**TASK STATEMENT:**

PERFORM GACT CONTINUITY AND LOGIC SELF-TESTS (Z1357)

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

C31U-016-03-00-C1-02  
C31U-807-03-00-D1-02  
CONTINUITY ACCESSORY KIT  
LOGIC ACCESSORY KIT

**REFERENCES:**

33DA-103-32-1  
GACT CONTINUITY SELF-TEST BOOK  
GACT LOGIC SELF-TEST BOOK

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A PERFORM POWER ON SELF-TESTS OF GACTs (Z1365)  
A PERFORM CONTINUITY TESTS  
A PERFORM LOGIC TESTS

**SKILLS:**

S CONNECT ADAPTER AND CABLES  
S LOAD PROGRAM  
S OPERATE GACT  
S USE KITS TO PROGRAM GACT

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K FOLLOW INFORMATION PRESENTED ON TAPE PRINTOUT

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | Z1357         |            | 0          | 0          | 0        | 1        | 5.98       |     |
| 451X6B | Z1357         |            | 4          | 11         | 11       | 1        | 5.98       |     |
| 451X6  | Z1357         |            | 2          | 5          | 6        | 1        | 5.98       |     |
| 451X6A | Z1365         |            | 0          | 0          | 0        | 1        | 5.93       |     |
| 451X6B | Z1365         |            | 4          | 9          | 10       | 1        | 5.93       |     |
| 451X6  | Z1365         |            | 2          | 5          | 5        | 1        | 5.93       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

Z1357 PERFORM GRUMMAN AUTOMATIC CABLE TESTER (GACT) CONTINUITY  
AND LOGIC SELF-TESTS  
Z1365 PERFORM POWER ON SELF-TESTS OF GACTs

**TASK NUMBER: 61170**

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN GACT

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CHIP PULLER  
CTK  
ESD PROTECTIVE EQUIPMENT  
MULTIMETER

**REFERENCES:**

33DA103-32-1

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**SKILLS:**

S OPERATE GACT  
S PERFORM VISUAL INSPECTIONS  
S USE CHIP PULLER TO REMOVE CHIPS  
S USE COMMON HANDTOOLS  
S USE MULTIMETER

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY ESD PRECAUTIONS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY POWER SUPPLY THEORY OF OPERATION  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY SOLID STATE DIODE THEORY OF OPERATION  
K APPLY TECHNICAL DATA  
K APPLY THEORY OF OPERATION OF COMPUTER MEMORIES  
K DETERMINE ONES COMPLEMENTS OF PRINTED FAIL  
K DETERMINE WHETHER MALFUNCTION IS IN GACT, ADAPTER, OR LRU  
K INTERPRET LOGIC FAIL PRINTOUT  
K INTERPRET SWITCHBOARD TROUBLESHOOTING CHART TO DETERMINE WHICH  
CHIP HAS FAILED  
K ISOLATE FAULTY POWER SUPPLIES

**KNOWLEDGE:**

K ISOLATE FAULTY SOLID STATE DIODES  
K PERFORM BINARY CONVERSIONS  
K PERFORM BINARY MATH OPERATION  
K PERFORM HEXADECIMAL CONVERSIONS  
K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION  
PROCEDURES (F 278)  
K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES

**TASK NUMBER: 61180**

**TASK STATEMENT:**

**REPAIR GACT**

**TRAINING RECOMMENDATIONS:**

**RECOMMEND: 5-LVL OJT**

**EQUIPMENT, TOOLS, SUPPLIES:**

**CHIP PULLER  
CLEANING SOLVENTS AND BRUSHES  
CTK  
ESD PROTECTIVE EQUIPMENT**

**REFERENCES:**

**33DA103-32-1  
33DA103-32-4**

**CURS:**

**ISOLATED MALFUNCTION**

**STANDARDS:**

**IAW REFERENCES**

**ACTIVITIES:**

**A CLEAN CONTACTS (F 210)  
A ORDER PARTS  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)  
A REPAIR WIRING (TASK NUMBER: 61440)  
A RESEAT SRUs**

**SKILLS:**

**S PERFORM VISUAL INSPECTIONS  
S USE CHIP PULLER TO REMOVE CHIPS  
S USE COMMON HANDTOOLS**

**KNOWLEDGE:**

**K ANNOTATE FORMS  
K APPLY ESD PRECAUTIONS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PRECAUTIONS  
K APPLY TECHNICAL DATA**

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS

**TASK NUMBER: 61190**

**TASK STATEMENT:**

PERFORM PERIODIC INSPECTIONS ON GACT

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

ALCOHOL  
C31U-806-04-00-01-03 (4 TAPES)  
CLEANING SOLVENTS AND BRUSHES  
COTTON SWABS

**REFERENCES:**

33DA103-32-1  
GRUMMAN INTERFACE DEVICE ADAPTER BOOK

**CONDITIONS:**

CANNOT RUN IDA UNLESS GACT IS GOOD

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CLEAN CONTACTS (F 210)  
A CLEAN TAPE HEAD AND MOTOR DRIVE ROLLER  
A CLEAN WORK SURFACES  
A ORDER PARTS  
A PERFORM GACT CONTINUITY AND LOGIC SELF-TESTS (Z1357)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A TEST INTERFACE DEVICE ADAPTER

**SKILLS:**

S LOAD TAPES  
S OPERATE GACT  
S PERFORM VISUAL INSPECTIONS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | Z1357         |            | 0          | 0          | 0        | 1        | 5.98       |     |
| 451X6B | Z1357         |            | 4          | 11         | 11       | 1        | 5.98       |     |
| 451X6  | Z1357         |            | 2          | 5          | 6        | 1        | 5.98       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
Z1357 PERFORM POWER ON SELF-TEST OF GACTs

**TASK NUMBER:** 61200

**TASK STATEMENT:**

PERFORM OPERATIONAL TEST OF LRUs THAT RUN ON GACT

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

AUXILIARY POWER SUPPLY  
CTK  
GACT  
MULTIMETER  
TASU

**REFERENCES:**

APPLICABLE GRUMMAN MANUALS (TAPE)  
APPLICABLE TEST PROCEDURES TO

**CUES:**

SUSPECTED MALFUNCTION; AFTER REPAIR; FUNCTIONAL CHECK

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A EXECUTE TEST

**SKILLS:**

S CONNECT LRU TO TESTER  
S LOAD TEST PROGRAM  
S OPERATE GACT  
S PERFORM VISUAL INSPECTIONS  
S USE AUXILIARY POWER SUPPLY TO INJECT VOLTAGES IN LRUs THROUGH  
TASU  
S USE COMMON HANDTOOLS  
S USE MULTIMETER  
S USE TAPES TO LOAD TEST PROGRAM  
S USE TASU TO INTERCONNECT LRUs TO GACT

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES

**KNOWLEDGE:**

K APPLY TECHNICAL DATA  
K FOLLOW INFORMATION ON TAPE PRINTOUT

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 243         |            | 61         | 62         | 65       | 39       | 4.32       |     |
| 451X6B | F 243         |            | 50         | 60         | 59       | 39       | 4.32       |     |
| 451X6  | F 243         |            | 55         | 60         | 62       | 39       | 4.32       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 243 PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECTION (T AND I)  
OF LRUs ISSUED FROM SUPPLY

**TASK NUMBER: 61210**

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN LRU<sub>s</sub> THAT RUN ON THE GACT

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

AUXILIARY POWER SUPPLY  
CTK  
ESD PROTECTIVE EQUIPMENT  
GACT  
MULTIMETER  
TASU

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO  
APPLICABLE GRUMMAN MANUALS (TAPE)  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
APPLICABLE TEST STATION TO

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**SKILLS:**

S OPERATE GACT  
S PERFORM VISUAL INSPECTIONS  
S USE AUXILIARY POWER SUPPLY  
S USE COMMON HANDTOOLS  
S USE MULTIMETER  
S USE TASU

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY DC CIRCUIT THEORY OF OPERATION  
K APPLY ESD PRECAUTIONS  
K APPLY LED THEORY OF OPERATION  
K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION  
K APPLY LRU THEORY OF OPERATION  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY RELAY THEORY OF OPERATION  
K APPLY SCR THEORY OF OPERATION  
K APPLY SHOP SAFETY PROCEDURES

**KNOWLEDGE:**

K APPLY SOLID STATE DIODE THEORY OF OPERATION  
K APPLY SYNCHRO-SERVO THEORY OF OPERATION  
K APPLY TECHNICAL DATA  
K APPLY TRANSFORMER THEORY OF OPERATION  
K APPLY ZENER DIODE THEORY OF OPERATION  
K ISOLATE FAULTY LEDs  
K ISOLATE FAULTY LIMITER TRANSISTOR CIRCUITS  
K ISOLATE FAULTY RELAYS  
K ISOLATE FAULTY SCRs  
K ISOLATE FAULTY SOLID STATE DIODES  
K ISOLATE FAULTY SYNCHROS-SERVOS  
K ISOLATE FAULTY TRANSFORMERS  
K ISOLATE FAULTY ZENER DIODES  
K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION  
PROCEDURES (F 278)  
K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
K TROUBLESHOOT DC CIRCUITS  
K TROUBLESHOOT LIMITER CIRCUIT TRANSISTORS  
K TROUBLESHOOT RELAYS  
K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES

**TASK NUMBER:** 61220

**TASK STATEMENT:**

REPAIR LRUs THAT RUN ON THE GACT

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES  
CTK  
ESD PROTECTIVE EQUIPMENT

**REFERENCES:**

APPLICABLE GRUMMAN MANUAL  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
APPLICABLE IPB

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CLEAN CONTACTS (F 210)  
A ORDER PARTS  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)  
A REPAIR WIRING (TASK NUMBER: 61440)  
A RESEAT SRUs

**SKILLS:**

S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY ESD PRECAUTIONS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS

F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
LINE REPLACEABLE UNITS (LRU)

**TASK NUMBER: 61230**

**TASK STATEMENT:**

PERFORM OPERATIONAL TEST OF AN/ALQ-131 ECM PODS (Y1327)

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LEVEL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

20DB DIRECTIONAL COUPLERS  
500HM DUMMY LOADS  
AN/ALM-186  
AN/ALM-187  
AN/ALM-188  
AN/ALM-192  
AUTOMATIC PRE-SELECTOR  
CTK  
DC BLOCKS (FILTERS)  
DIGITAL LOGIC PROBE  
DIGITAL MULTIMETER  
FIX ATTENUATOR  
FREQUENCY COUNTER  
HIGH PASS FILTER  
LOW PASS FILTER  
MICROWAVE PULSE COUNTER  
OPERATIONAL FLIGHT PROGRAM  
OSCILLOSCOPE  
POWER DIVIDER  
RF DETECTOR  
RF GENERATOR  
SIGNAL GENERATOR  
SPECTRUM ANALYZER  
STEP ATTENUATOR  
TIME INTERVAL COUNTER  
TORQUE WRENCHES  
VARIABLE VOLTAGE ATTENUATOR

**REFERENCES:**

12P3-2ALQ131-12-1-1

**CONDITIONS:**

RECEIVE ANTENNA ASSEMBLY MUST BE TESTED WITH COVERS ON. SYSTEM  
SHOULD NOT BE OPERATED IF LIGHTNING IS WITHIN 10 MILES.

**CUES:**

SUSPECTED MALFUNCTION; PERIODIC MAINTENANCE; FUNCTIONAL CHECK

## **STANDARDS:**

### **IAW REFERENCES**

## **ACTIVITIES:**

- A CHECK AFT ANTENNA ASSEMBLY
- A CHECK FORWARD ANTENNA ASSEMBLY
- A CHECK HIGH VOLTAGE POWER SUPPLY
- A CHECK INTERFACE-CONTROL MODULE
- A CHECK LOW VOLTAGE POWER SUPPLY
- A CHECK RECEIVE ANTENNA ASSEMBLY
- A CHECK RF ASSEMBLY
- A CHECK RF BANDS
- A CHECK TRANSMIT CONTROL ASSEMBLY

## **SKILLS:**

- S CONNECT CABLES
- S CONNECT COOLING SYSTEM TO POD
- S CONNECT POD TO AN/ALM-186
- S INSTALL ANTENNA SHIELDS
- S INSTALL POD ON AN/ALM-188
- S LOAD PROGRAM
- S OPERATE AN/ALM-186
- S OPERATE AN/ALM-187
- S OPERATE AN/ALM-192
- S USE 20DB DIRECTIONAL COUPLER
- S USE 500HM DUMMY LOAD
- S USE AUTOMATIC PRE-SELECTOR
- S USE COMMON HANDTOOLS
- S USE DC BLOCKS (FILTERS)
- S USE DIGITAL LOGIC PROBE
- S USE DIGITAL MULTIMETER
- S USE FIX ATTENUATOR
- S USE FREQUENCY COUNTER
- S USE HIGH PASS FILTER
- S USE LOW PASS FILTER
- S USE MICROWAVE PULSE COUNTER
- S USE OSCILLOSCOPE
- S USE POWER DIVIDER
- S USE RF DETECTOR
- S USE RF GENERATOR
- S USE SIGNAL GENERATOR
- S USE SPECTRUM ANALYZER
- S USE STEP ATTENUATOR
- S USE TIME INTERVAL COUNTER
- S USE TORQUE WRENCHES
- S USE VARIABLE VOLTAGE ATTENUATOR

## **KNOWLEDGE:**

- K ANNOTATE FORMS
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY SHOP SAFETY PROCEDURES

**KNOWLEDGE:**

K APPLY TECHNICAL DATA  
K COMPUTE RF GAIN  
K MONITOR BAND ATTENUATION VALUES  
K PERFORM BASIC AC CIRCUIT CALCULATIONS  
K PERFORM BASIC DC CIRCUIT CALCULATIONS

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | Y1325         |            | 0          | 0          | 1        | 1        | 4.91       |     |
| 451X6B | Y1325         |            | 23         | 11         | 8        | 1        | 4.91       |     |
| 451X6  | Y1325         |            | 9          | 5          | 4        | 1        | 4.91       |     |
| 451X6A | Y1326         |            | 0          | 0          | 1        | 2        | 5.19       |     |
| 451X6B | Y1326         |            | 23         | 11         | 8        | 2        | 5.19       |     |
| 451X6  | Y1326         |            | 9          | 5          | 4        | 2        | 5.19       |     |
| 451X6A | Y1327         |            | 0          | 0          | 1        | 2        | 6.18       |     |
| 451X6B | Y1327         |            | 23         | 11         | 8        | 2        | 6.18       |     |
| 451X6  | Y1327         |            | 9          | 5          | 4        | 2        | 6.18       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

Y1325 PERFORM OPERATIONAL TESTS OF AN/ALQ-131 ECM POD COOLING  
SYSTEMS  
Y1326 PERFORM OPERATIONAL TESTS OF AN/ALQ-131 ECM POD POWER  
SUPPLIES  
Y1327 PERFORM OPERATIONAL TESTS OF AN/ALQ-131 ECM PODS

**TASK NUMBER:** 61240

**TASK STATEMENT:** .

ISOLATE MALFUNCTIONS IN AN/ALQ-131 ECM PODS (Y1313)

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LEVEL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

AN/ALM-186  
AN/ALM-187  
AN/ALM-188  
AN/ALM-192  
ANTENNA SHIELD  
CTK  
DC BLOCK  
DIGITAL MULTIMETER  
DIRECTIONAL COUPLER  
EXTENDER BOARDS  
FIXED ATTENUATORS  
FREQUENCY COUNTER  
FREQUENCY RESPONSE TEST SET  
MICROWAVE PULSE COUNTER  
MONITOR CART  
MULTIBAND CONTROL UNIT  
PEAK POWER METER  
POWER AND FEED THROUGH PANEL  
RF DETECTOR  
RF DIRECTIONAL COUPLERS  
RF SIGNAL GENERATOR  
SOLDERING STATION  
SOURCE CART  
STEP ATTENUATOR  
SWEEP OSCILLATOR  
TIME BASE AND DELAY GENERATOR  
TIME INTERVAL COUNTER  
TORQUE WRENCHES  
VERTICAL AMPLIFIER

**REFERENCES:**

12P3-2ALQ131-12-1 (CONFIDENTIAL)  
12P3-2ALQ131-12-1-1  
12P3-2ALQ131-12-2 (CONFIDENTIAL)  
12P3-2ALQ131-12-3 (CONFIDENTIAL)  
12P3-2ALQ131-12-4 (CONFIDENTIAL)  
12P3-2ALQ131-12-5 (CONFIDENTIAL)  
12P3-2ALQ131-14  
33D7-6-160-1

**CONDITIONS:**

SYSTEM SHOULD NOT BE OPERATED IF LIGHTNING IS WITHIN 10 MILES.

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

- A EXECUTE ABAGOO TEST (OPERATION READY TEST)
- A EXECUTE ATLAS PROGRAM
- A EXECUTE AUTOMATIC TROUBLESHOOTING TREE PROGRAM
- A EXECUTE CITS (PROGRAM)
- A EXECUTE PICK PROGRAM
- A EXECUTE TOTAL SYSTEM TEST PROGRAM
- A EXECUTE TROUBLESHOOTING PROGRAM

**SKILLS:**

- S CONNECT AN/ALM-186
- S CONNECT AN/ALM-192
- S CONNECT MONITOR CART ASSEMBLY
- S CONNECT SOURCE CART ASSEMBLY
- S INSTALL EXTENDER BOARDS
- S INSTALL POD ON AN/ALM-188
- S INSTALL RECEIVE ANTENNA SHIELD
- S LOAD CITS
- S LOAD PROGRAM
- S OPERATE AN/ALM-186
- S OPERATE AN/ALM-187
- S OPERATE AN/ALM-192
- S PERFORM VISUAL INSPECTIONS
- S SOLDER OR DESOLDER PC BOARDS
- S SOLDER OR DESOLDER TERMINAL CONNECTIONS
- S USE ANTENNA SHIELD
- S USE COMMON HANDTOOLS
- S USE DC BLOCK
- S USE DIGITAL MULTIMETER
- S USE DIRECTIONAL COUPLER
- S USE FIXED ATTENUATORS
- S USE FREQUENCY COUNTER
- S USE FREQUENCY RESPONSE TEST SET
- S USE MICROWAVE PULSE COUNTER
- S USE MONITOR CART
- S USE MULTIBAND CONTROL UNIT
- S USE PEAK POWER METER
- S USE POWER AND FEED THROUGH PANEL
- S USE RF DETECTOR
- S USE RF DIRECTIONAL COUPLERS
- S USE RF SIGNAL GENERATOR

## SKILLS:

- S USE SOURCE CART
- S USE STEP ATTENUATOR
- S USE SWEEP OSCILLATOR
- S USE TIME BASE AND DELAY GENERATOR
- S USE TIME INTERVAL COUNTER
- S USE TORQUE WRENCHES
- S USE VERTICAL AMPLIFIER

## KNOWLEDGE:

- K ANNOTATE FORMS
- K APPLY AC CIRCUIT THEORY OF OPERATION
- K APPLY AC GENERATOR THEORY OF OPERATION
- K APPLY AM MODULATION TRANSMITTER THEORY OF OPERATION
- K APPLY AM RECEIVER THEORY OF OPERATION
- K APPLY ANTENNA THEORY OF OPERATION
- K APPLY BASIC RF PRINCIPLES
- K APPLY CHOPPER (SYNCHROUS VIBRATOR) THEORY OF OPERATION
- K APPLY CLAMPER CIRCUIT THEORY OF OPERATION
- K APPLY COMBINATIONAL LOGIC CIRCUIT THEORY OF OPERATION
- K APPLY COMPUTER PERIPHERAL DEVICE THEORY OF OPERATION
- K APPLY COMPUTER THEORY OF OPERATION
- K APPLY DC CIRCUIT THEORY OF OPERATION
- K APPLY DC GENERATOR THEORY OF OPERATION
- K APPLY DC MOTOR THEORY OF OPERATION
- K APPLY ELECTRON TUBE AMPLIFIER THEORY OF OPERATION
- K APPLY FLIP-FLOP THEORY OF OPERATION
- K APPLY FM RECEIVER THEORY OF OPERATION
- K APPLY FM TRANSMITTER THEORY OF OPERATION
- K APPLY FREQUENCY SENSITIVE FILTER THEORY OF OPERATION
- K APPLY INDUCTOR THEORY OF OPERATION
- K APPLY INTEGRATED CIRCUIT THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT ZENER DIODE THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT COUNTER THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT REGISTER THEORY OF OPERATION
- K APPLY MAIN LOGIC GATE THEORY OF OPERATION
- K APPLY MICROPROCESSOR THEORY OF OPERATION
- K APPLY MICROWAVE OSCILLATOR OR AMPLIFIER THEORY OF OPERATION
- K APPLY MULTIVIBRATOR CIRCUIT THEORY OF OPERATION
- K APPLY OPERATIONAL AMPLIFIER THEORY OF OPERATION
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY OSCILLATOR CIRCUIT THEORY OF OPERATION
- K APPLY POD THEORY OF OPERATION
- K APPLY POWER SUPPLY FILTER THEORY OF OPERATION
- K APPLY POWER SUPPLY RECTIFIER THEORY OF OPERATION
- K APPLY POWER SUPPLY THEORY OF OPERATION
- K APPLY PULSE MODULATION TRANSMITTER THEORY OF OPERATION
- K APPLY PULSE MODULATION RECEIVER THEORY OF OPERATION
- K APPLY RAMP A/D CONVERTER THEORY OF OPERATION
- K APPLY RCL CIRCUIT THEORY OF BASIC OPERATION
- K APPLY RCL CIRCUIT THEORY OF RESONANT OPERATION

## KNOWLEDGE :

- K APPLY RESISTOR THEORY OF OPERATION
- K APPLY SCR THEORY OF OPERATION
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY SOLID STATE DIODE THEORY OF OPERATION
- K APPLY TECHNICAL DATA
- K APPLY THEORY OF OPERATION OF COMPUTER MEMORIES
- K APPLY THREE-PHASE TRANSFORMER THEORY OF OPERATION
- K APPLY TRANSFORMER THEORY OF OPERATION
- K APPLY TRANSISTOR AMPLIFIER COUPLING CIRCUIT THEORY OF OPERATION
- K APPLY TRANSISTOR AMPLIFIER STABILIZATION CIRCUIT THEORY OF OPERATION
- K APPLY TRANSISTOR AMPLIFIER CIRCUIT THEORY OF OPERATION
- K APPLY TRANSMISSION LINE THEORY OF OPERATION
- K APPLY TTL THEORY OF OPERATION
- K APPLY VOLTAGE REGULATOR THEORY OF OPERATION
- K APPLY WAVEGUIDE THEORY OF OPERATION
- K APPLY WAVESHAPING CIRCUIT THEORY OF OPERATION
- K APPLY ZENER DIODE THEORY OF OPERATION
- K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING
- K INTERPRET RF SPECIFICATIONS
- K ISOLATE FAULTY AC CIRCUITS
- K ISOLATE FAULTY AC GENERATORS
- K ISOLATE FAULTY AM TRANSMITTERS
- K ISOLATE FAULTY ANTENNAS
- K ISOLATE FAULTY CHOPPERS (SYNCHRONOUS VIBRATORS)
- K ISOLATE FAULTY CLAMPER CIRCUITS
- K ISOLATE FAULTY COMBINATIONAL LOGIC CIRCUITS
- K ISOLATE FAULTY COMPUTER MAJOR UNITS
- K ISOLATE FAULTY COMPUTER MEMORIES
- K ISOLATE FAULTY COMPUTER PERIPHERAL DEVICES
- K ISOLATE FAULTY DC CIRCUITS
- K ISOLATE FAULTY DC GENERATORS
- K ISOLATE FAULTY DC MOTORS
- K ISOLATE FAULTY ELECTRON TUBE AMPLIFIERS
- K ISOLATE FAULTY FLIP-FLOPS
- K ISOLATE FAULTY FM MODULATION TRANSMITTERS
- K ISOLATE FAULTY FM RECEIVERS
- K ISOLATE FAULTY FREQUENCY SENSITIVE FILTERS
- K ISOLATE FAULTY INDUCTORS
- K ISOLATE FAULTY INTEGRATED CIRCUITS
- K ISOLATE FAULTY LIMITER CIRCUIT DIODES
- K ISOLATE FAULTY LIMITER CIRCUIT ZENER DIODES
- K ISOLATE FAULTY LIMITER TRANSISTOR CIRCUITS
- K ISOLATE FAULTY LOGIC COUNTERS
- K ISOLATE FAULTY MAIN LOGIC GATES
- K ISOLATE FAULTY MICROPROCESSORS
- K ISOLATE FAULTY MICROWAVE OSCILLATORS OR AMPLIFIERS
- K ISOLATE FAULTY MULTIVIBRATOR CIRCUITS
- K ISOLATE FAULTY OPERATIONAL AMPLIFIERS
- K ISOLATE FAULTY OSCILLATOR CIRCUITS
- K ISOLATE FAULTY POWER SUPPLIES
- K ISOLATE FAULTY POWER SUPPLY FILTERS

## KNOWLEDGE :

- K ISOLATE FAULTY POWER SUPPLY RECTIFIERS
- K ISOLATE FAULTY PULSE MODULATION RECEIVERS
- K ISOLATE FAULTY PULSE MODULATION TRANSMITTERS
- K ISOLATE FAULTY RAMP A/D CONVERTERS
- K ISOLATE FAULTY REGISTER LOGIC CIRCUITS
- K ISOLATE FAULTY RESISTORS
- K ISOLATE FAULTY SCRs
- K ISOLATE FAULTY SOLID STATE DIODES
- K ISOLATE FAULTY THREE-PHASE TRANSFORMERS
- K ISOLATE FAULTY TRANSFORMERS
- K ISOLATE FAULTY TRANSISTOR AMPLIFIER STABILIZATION CIRCUITS
- K ISOLATE FAULTY TRANSISTOR AMPLIFIER COUPLING CIRCUITS
- K ISOLATE FAULTY TRANSISTOR AMPLIFIER CIRCUITS
- K ISOLATE FAULTY TRANSMISSION LINES
- K ISOLATE FAULTY TTLs
- K ISOLATE FAULTY WAVEGUIDES
- K ISOLATE FAULTY WAVESHAPING CIRCUITS
- K ISOLATE FAULTY ZENER DIODES
- K PERFORM BASIC AC CIRCUIT CALCULATIONS
- K PERFORM BASIC DC CIRCUIT CALCULATIONS
- K PERFORM FREQUENCY SENSITIVE FILTER CALCULATIONS
- K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)
- K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)
- K TROUBLESHOOT AC CIRCUITS
- K TROUBLESHOOT AC GENERATORS
- K TROUBLESHOOT AM TRANSMITTERS
- K TROUBLESHOOT ANTENNAS
- K TROUBLESHOOT CHOPPERS (SYNCHROUS VIBRATORS)
- K TROUBLESHOOT CLAMPER CIRCUITS
- K TROUBLESHOOT COMBINATIONAL LOGIC CIRCUITS
- K TROUBLESHOOT COMPUTER MAJOR UNITS
- K TROUBLESHOOT COMPUTER MEMORIES
- K TROUBLESHOOT COMPUTER PERIPHERAL DEVICES
- K TROUBLESHOOT DC CIRCUITS
- K TROUBLESHOOT DC GENERATORS
- K TROUBLESHOOT DC MOTORS
- K TROUBLESHOOT ELECTRON TUBE AMPLIFIERS
- K TROUBLESHOOT FLIP-FLOPS
- K TROUBLESHOOT FM MODULATION TRANSMITTERS
- K TROUBLESHOOT FM RECEIVER CIRCUITS
- K TROUBLESHOOT FREQUENCY SENSITIVE FILTERS
- K TROUBLESHOOT INDUCTORS
- K TROUBLESHOOT LIMITER CIRCUIT DIODES
- K TROUBLESHOOT LIMITER CIRCUIT TRANSISTORS
- K TROUBLESHOOT LIMITER CIRCUIT ZENER DIODES
- K TROUBLESHOOT LOGIC COUNTERS
- K TROUBLESHOOT LOGIC REGISTERS
- K TROUBLESHOOT MAIN LOGIC GATES
- K TROUBLESHOOT MICROPROCESSOR-CONTROLLED SYSTEMS
- K TROUBLESHOOT MICROWAVE OSCILLATORS AND AMPLIFIERS
- K TROUBLESHOOT OPERATIONAL AMPLIFIERS
- K TROUBLESHOOT POWER SUPPLY CIRCUITS

**KNOWLEDGE:**

K TROUBLESHOOT POWER SUPPLY FILTERS  
K TROUBLESHOOT POWER SUPPLY RECTIFIERS  
K TROUBLESHOOT PULSE MODULATION RECEIVERS  
K TROUBLESHOOT PULSE MODULATION TRANSMITTERS  
K TROUBLESHOOT RAMP A/D CONVERTERS  
K TROUBLESHOOT THREE-PHASE TRANSFORMERS  
K TROUBLESHOOT TRANSFORMERS  
K TROUBLESHOOT TRANSISTOR AMPLIFIER STABILIZATION CIRCUITS  
K TROUBLESHOOT TRANSISTOR AMPLIFIER CIRCUITS  
K TROUBLESHOOT TRANSISTOR AMPLIFIER COUPLING CIRCUITS  
K TROUBLESHOOT TTL LOGIC FAMILIES  
K TROUBLESHOOT VOLTAGE REGULATOR  
K TROUBLESHOOT WAVE GENERATING CIRCUIT MULTIVIBRATORS  
K TROUBLESHOOT WAVE GENERATING CIRCUIT OSCILLATORS  
K TROUBLESHOOT WAVESHAPING CIRCUITS  
K UTILIZE FLOW CHARTS  
K UTILIZE FUNCTIONAL DIAGRAMS  
K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
K VERIFY SUSPECTED FAULTY SRUs

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | Y1313         |            | 0          | 0          | 1        | 2        | 7.40       |     |
| 451X6B | Y1313         |            | 23         | 11         | 7        | 2        | 7.40       |     |
| 451X6  | Y1313         |            | 9          | 5          | 4        | 2        | 7.40       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
Y1313 ISOLATE MALFUNCTIONS IN AN/ALQ-131 ECM PODS

**TASK NUMBER:** 61250

**TASK STATEMENT:**

REPAIR AN/ALQ-131 ECM PODS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LEVEL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

AN/ALM-186  
AN/ALM-187  
BOARD EXTRACTOR  
CLEANING SOLVENTS AND BRUSHES  
CTK  
EXTENDER BOARDS  
MULTIMETER  
ROLLERS  
SCRAPER  
SILICONE COMPOUND HEAT SINK  
TORQUE WRENCH

**REFERENCES:**

1-1A-8 CHAPTER 16  
12P3-2ALQ131-14

**CONDITIONS:**

SYSTEM SHOULD NOT BE OPERATED IF LIGHTNING IS WITHIN 10 MILES.

**CUES:**

ISOLATED MALFUNCTIONS

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN SYSTEM  
A CLEAN CONTACTS (F 210)  
A ORDER PARTS  
A REMOVE AND REPLACE TERMINAL LUGS  
A REPAIR HARD LINE CABLES  
A REPAIR WIRING (TASK NUMBER: 61440)  
A REMOVE AND REPLACE RADOME  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)  
A RESEAT SRUs

**SKILLS:**

S APPLY SILICONE COMPOUND HEAT SINK  
 S INSTALL EXTENDER BOARDS  
 S OPERATE AN/ALM-186  
 S OPERATE AN/ALM-187  
 S PERFORM SAFETY WIRING (TASK NUMBER: 61450)  
 S PERFORM VISUAL INSPECTIONS  
 S USE BOARD EXTRACTOR  
 S USE COMMON HANDTOOLS  
 S USE MULTIMETER  
 S USE ROLLERS  
 S USE SCRAPER  
 S USE TORQUE WRENCH

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY SHOP SAFETY PRECAUTIONS  
 K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | Y1298         |            | 0          | 0          | 1        | 2        | 6.75       |     |
| 451X6B | Y1298         |            | 27         | 12         | 7        | 2        | 6.75       |     |
| 451X6  | Y1298         |            | 11         | 6          | 4        | 2        | 6.75       |     |
| 451X6A | Y1339         |            | 0          | 0          | 1        | 2        | 6.33       |     |
| 451X6B | Y1339         |            | 27         | 12         | 8        | 2        | 6.33       |     |
| 451X6  | Y1339         |            | 11         | 6          | 4        | 2        | 6.33       |     |
| 451X6A | Y1340         |            | 0          | 0          | 0        | 1        | 4.62       |     |
| 451X6B | Y1340         |            | 8          | 4          | 7        | 1        | 4.62       |     |
| 451X6  | Y1340         |            | 3          | 2          | 3        | 1        | 4.62       |     |
| 451X6A | Y1342         |            | 0          | 0          | 0        | 0        | 5.24       |     |
| 451X6B | Y1342         |            | 4          | 1          | 1        | 0        | 5.24       |     |
| 451X6  | Y1342         |            | 2          | 1          | 1        | 0        | 5.24       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS

Y1298 ALIGN AN/ALQ-131 ECM PODS

Y1339 REMOVE OR REPLACE AN/ALQ-131 ECM POD COMPONENTS

Y1340 REMOVE OR REPLACE PYLONS

Y1342 SERVICE AN/ALQ-131 ECM POD ACCUMULATORS

**TASK NUMBER:** 61260

**TASK STATEMENT:**

PERFORM OPERATIONAL TESTS OF TEST SETS USED WITH THE AN/ALQ-131  
ECM PODS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LEVEL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

AIR HOSE  
ANTENNA SHIELDS  
CTK  
HOIST  
LUBRICANT  
MONITOR CART ASSEMBLY  
MULTIMETER  
RAGS  
SOURCE CART ASSEMBLY  
VACUUM CLEANER  
WARM SOAPY WATER

**REFERENCES:**

33D7-6-160-1  
33D7-25-34-1  
33DA85-25-1

**CONDITIONS:**

CONSOLE SHOULD NOT BE OPERATED IF LIGHTNING IS WITHIN 10 MILES

**CUES:**

SUSPECTED MALFUNCTION; PERIODIC MAINTENANCE; AFTER REPAIR;  
FUNCTIONAL CHECK

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CLEAN AIR FILTERS, FANS, ETC.  
A EXECUTE AGEST TEST  
A EXECUTE INPUT/OUTPUT BUFFER TEST  
A EXECUTE LODD MODE TEST  
A EXECUTE ON-LINE MODE TEST  
A EXECUTE SWITCH AND INDICATOR CHECKOUT  
A EXECUTE TAPE READ TEST  
A EXECUTE WAVEFORM MONITOR TEST  
A INSPECT UTILITY OUTLETS, ANTENNA SHIELD, AND HOIST

**ACTIVITIES:**

A LUBRICATE CHAINS, MOTOR, WHEELS, CASTERS, ETC.  
A OPERATE ANTENNA SHIELDS

**SKILLS:**

S CONNECT AIR HOSE  
S CONNECT CABLES  
S INSTALL ANTENNA SHIELDS  
S OPERATE CONSOLE TAPE LOADER  
S OPERATE TEST SETS  
S PERFORM VISUAL INSPECTIONS  
S USE COMMON HANDTOOLS  
S USE HOIST TO MANEUVER POD  
S USE MONITOR CART ASSEMBLY  
S USE MULTIMETER TO MEASURE VOLTAGES AND RESISTANCE  
S USE SOURCE CART ASSEMBLY

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY GUIDELINES PRESENTED ON COMPUTER CONSOLE  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | Y1324         |            | 0          | 0          | 1        | 2        | 4.50       |     |
| 451X6B | Y1324         |            | 23         | 11         | 7        | 2        | 4.50       |     |
| 451X6  | Y1324         |            | 9          | 5          | 4        | 2        | 4.50       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

Y1324 PERFORM OPERATIONAL TESTS OF AN/ALQ-131 CONTROL BOXES

**TASK NUMBER:** 61270

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN TEST SETS USED WITH AN/ALQ-131 ECM PODS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LEVEL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

AN/ALM-186  
AN/ALM-187  
AN/ALM-188  
AN/ALM-192  
CTK  
DIGITAL LOGIC PROBE  
FREQUENCY COUNTER  
MULTIMETER  
OSCILLOSCOPE  
TORQUE WRENCH

**REFERENCES:**

33DA85-25-1  
33D7-6-160-1  
33D7-25-34-1  
12P3-2ALQ131-12-2 (CONFIDENTIAL)

**CONDITIONS:**

CONSOLE SHOULD NOT BE TESTED IF LIGHTING IS WITHIN 10 MILES.

**CUES:**

POD CHECKOUT OR OPERATIONAL CHECKOUT

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A EXECUTE AGEST

**SKILLS:**

S OPERATE AN/ALM-186  
S OPERATE AN/ALM-187  
S OPERATE AN/ALM-188  
S OPERATE AN/ALM-192  
S PERFORM VISUAL INSPECTION  
S USE COMMON HANDTOOLS  
S USE DIGITAL LOGIC PROBE

## SKILLS:

- S USE FREQUENCY COUNTER
- S USE MULTIMETER TO CHECK VOLTAGES AND CONTINUITY
- S USE OSCILLOSCOPE
- S USE TORQUE WRENCH

## KNOWLEDGE:

- K ANNOTATE FORMS
- K APPLY AC CIRCUIT THEORY OF OPERATION
- K APPLY AC GENERATOR THEORY OF OPERATION
- K APPLY COMPUTER PERIPHERAL DEVICE THEORY OF OPERATION
- K APPLY COMPUTER THEORY OF OPERATION
- K APPLY DC CIRCUIT THEORY OF OPERATION
- K APPLY INTEGRATED CIRCUIT THEORY OF OPERATION
- K APPLY INTERLOCK SWITCH THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT COUNTER THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT REGISTER THEORY OF OPERATION
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY RELAY THEORY OF OPERATION
- K APPLY RESISTOR THEORY OF OPERATION
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY SOLID STATE DIODE THEORY OF OPERATION
- K APPLY THEORY OF OPERATION OF PUSH-BUTTON SWITCHES
- K APPLY THREE-PHASE TRANSFORMER THEORY OF OPERATION
- K APPLY TRANSFORMER THEORY OF OPERATION
- K APPLY TTL THEORY OF OPERATION
- K APPLY WAVESHAPING CIRCUIT THEORY OF OPERATION
- K ISOLATE FAULTY AC CIRCUITS
- K ISOLATE FAULTY AC GENERATORS
- K ISOLATE FAULTY AC MOTORS
- K ISOLATE FAULTY COMPUTER MAJOR UNITS
- K ISOLATE FAULTY COMPUTER MEMORIES
- K ISOLATE FAULTY COMPUTER PERIPHERAL DEVICES
- K ISOLATE FAULTY DC CIRCUITS
- K ISOLATE FAULTY INTEGRATED CIRCUITS
- K ISOLATE FAULTY LOGIC COUNTERS
- K ISOLATE FAULTY REGISTER LOGIC CIRCUITS
- K ISOLATE FAULTY RELAYS
- K ISOLATE FAULTY RESISTORS
- K ISOLATE FAULTY SOLID STATE DIODES
- K ISOLATE FAULTY THREE-PHASE TRANSFORMERS
- K ISOLATE FAULTY TRANSFORMERS
- K ISOLATE FAULTY TTLS
- K ISOLATE FAULTY WAVESHAPING CIRCUITS
- K PERFORM BASIC AC CIRCUIT CALCULATIONS
- K PERFORM BASIC DC CIRCUIT CALCULATIONS
- K PERFORM BINARY CONVERSIONS
- K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)
- K TROUBLESHOOT AC CIRCUITS
- K TROUBLESHOOT AC GENERATORS
- K TROUBLESHOOT AC MOTORS
- K TROUBLESHOOT COMPUTER MAJOR UNITS

**KNOWLEDGE:**

K TROUBLESHOOT COMPUTER MEMORIES  
K TROUBLESHOOT COMPUTER PERIPHERAL DEVICES  
K TROUBLESHOOT DC CIRCUITS  
K TROUBLESHOOT LOGIC COUNTERS  
K TROUBLESHOOT LOGIC REGISTERS  
K TROUBLESHOOT RELAYS  
K TROUBLESHOOT THREE-PHASE TRANSFORMERS  
K TROUBLESHOOT TRANSFORMERS  
K TROUBLESHOOT TTL LOGIC FAMILIES  
K TROUBLESHOOT WAVESHAPING CIRCUITS  
K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | Y1309         |            | 0          | 0          | 0        | 1        | 6.67       |     |
| 451X6B | Y1309         |            | 0          | 0          | 1        | 1        | 6.67       |     |
| 451X6  | Y1309         |            | 0          | 0          | 1        | 1        | 6.67       |     |
| 451X6A | Y1312         |            | 0          | 0          | 1        | 2        | 5.01       |     |
| 451X6B | Y1312         |            | 15         | 7          | 7        | 2        | 5.01       |     |
| 451X6  | Y1312         |            | 6          | 3          | 4        | 2        | 5.01       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
Y1309 ISOLATE MALFUNCTIONS IN AN/ALM-186 TEST STATIONS  
Y1312 ISOLATE MALFUNCTIONS IN AN/ALQ-131 CONTROL BOXES

**TASK NUMBER:** 61280

**TASK STATEMENT:**

REPAIR TEST SETS USED WITH AN/ALQ-131 ECM PODS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LEVEL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES  
CTK  
ESD PROTECTIVE EQUIPMENT  
LUBRICANT  
MULTIMETER  
SEALANT  
THERMAL JOINT COMPOUND

**REFERENCES:**

33A1-12-1099-1  
33D7-25-34-1  
33D7-25-34-4  
33D7-6-160-1  
33D7-6-160-4  
33DA85-25-1  
33DA85-25-4

**CONDITIONS:**

CONSOLE SHOULD NOT BE OPERATED IF LIGHTNING IS WITHIN 10 MILES.

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN HIGH VOLTAGE PROBE  
A LUBRICATE CHAINS, MOTORS, WHEELS, COASTERS, ETC.  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE HIGH VOLTAGE PROBES  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)  
A REMOVE AND REPLACE TRUs (TASK NUMBER: 61380)  
A REPAIR WIRING (TASK NUMBER: 61440)  
A RESEAT SRUs

**SKILLS:**

S APPLY SEALANT  
S APPLY THERMAL JOINT COMPOUND  
A CLEAN CONTACTS (F 210)  
S PERFORM VISUAL INSPECTION  
S USE COMMON HANDTOOLS  
S USE MULTIMETER

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY ESD PRECAUTIONS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
A ORDER PARTS

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | Y1338         |            | 0          | 0          | 1        | 1        | 4.48       |     |
| 451X6B | Y1338         |            | 15         | 8          | 6        | 1        | 4.48       |     |
| 451X6  | Y1338         |            | 6          | 4          | 3        | 1        | 4.48       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
Y1338 REMOVE OR REPLACE AN/ALQ-131 CONTROL BOX COMPONENTS

**TASKS COMMON TO  
"A" AND "B" SHREDS**

**TASK NUMBER:** 61290

**TASK STATEMENT:**

PERFORM CENPAC PERIODIC INSPECTIONS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES  
CTK  
HEAD DEMAGNETIZER  
VACUUM GAUGE

**REFERENCES:**

33D7-12-21-1  
33D7-47-12-2  
33D7-47-12-8  
33D7-61-43-1

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN CENPAC MTUs (TASK NUMBER: 61330)  
A CLEAN CONTACTS (F 210)  
A CLEAN HEADS AND TAPE GUIDES  
A CLEAN MTU TRANSPORTS (J 445)  
A CLEAN TEST STATION BLOWERS AND FILTERS (F 219)  
A DEMAGNETIZE MTU HEADS (J 447)  
A ORDER PARTS  
A PERFORM MTU VACUUM ADJUSTMENTS (J 456)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A TEST AND INSPECT CENPAC PUNCH TAPE READERS (J 470)  
A TEST TELETYPEWRITER

**SKILLS:**

S OPERATE CENPAC  
S PERFORM VISUAL INSPECTION  
S USE COMMON HANDTOOLS

**SKILLS:**

S USE HEAD DEMAGNETIZER  
S USE VACUUM GAUGE

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            |            | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 219         |            | 89         | 88         | 82       | 45       | 2.78       |     |
| 451X6B | F 219         |            | 85         | 85         | 78       | 45       | 2.78       |     |
| 451X6  | F 219         |            | 86         | 85         | 80       | 45       | 2.78       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | J 445         |            | 5          | 11         | 12       | 3        | 3.29       |     |
| 451X6B | J 445         |            | 4          | 2          | 2        | 3        | 3.29       |     |
| 451X6  | J 445         |            | 5          | 7          | 7        | 3        | 3.29       |     |
| 451X6A | J 447         |            | 0          | 7          | 8        | 2        | 3.56       |     |
| 451X6B | J 447         |            | 0          | 0          | 0        | 2        | 3.56       |     |
| 451X6  | J 447         |            | 0          | 3          | 4        | 2        | 3.56       |     |
| 451X6A | J 456         |            | 3          | 8          | 10       | 3        | 5.33       |     |
| 451X6B | J 456         |            | 0          | 0          | 0        | 3        | 5.33       |     |
| 451X6  | J 456         |            | 2          | 4          | 5        | 3        | 5.33       |     |
| 451X6A | J 470         |            | 3          | 6          | 9        | 2        | 4.31       |     |
| 451X6B | J 470         |            | 0          | 0          | 0        | 2        | 4.31       |     |
| 451X6  | J 470         |            | 2          | 3          | 5        | 2        | 4.31       |     |

**SKILLS:**

S USE HEAD DEMAGNETIZER  
S USE VACUUM GAUGE

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 219         |            | 89         | 88         | 82       | 45       | 2.78       |     |
| 451X6B | F 219         |            | 85         | 85         | 78       | 45       | 2.78       |     |
| 451X6  | F 219         |            | 86         | 85         | 80       | 45       | 2.78       |     |
| 451X6A | F 220         |            | 84         | 81         | 77       | 46       | 3.39       |     |
| 451X6B | F 220         |            | 73         | 79         | 76       | 46       | 3.39       |     |
| 451X6  | F 220         |            | 78         | 79         | 77       | 46       | 3.39       |     |
| 451X6A | J 445         |            | 5          | 11         | 12       | 3        | 3.29       |     |
| 451X6B | J 445         |            | 4          | 2          | 2        | 3        | 3.29       |     |
| 451X6  | J 445         |            | 5          | 7          | 7        | 3        | 3.29       |     |
| 451X6A | J 447         |            | 0          | 7          | 8        | 2        | 3.56       |     |
| 451X6B | J 447         |            | 0          | 0          | 0        | 2        | 3.56       |     |
| 451X6  | J 447         |            | 0          | 3          | 4        | 2        | 3.56       |     |
| 451X6A | J 456         |            | 3          | 8          | 10       | 3        | 5.33       |     |
| 451X6B | J 456         |            | 0          | 0          | 0        | 3        | 5.33       |     |
| 451X6  | J 456         |            | 2          | 4          | 5        | 3        | 5.33       |     |
| 451X6A | J 470         |            | 3          | 6          | 9        | 2        | 4.31       |     |
| 451X6B | J 470         |            | 0          | 0          | 0        | 2        | 4.31       |     |
| 451X6  | J 470         |            | 2          | 3          | 5        | 2        | 4.31       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
F 219 INSPECT AND CLEAN TEST STATION BLOWERS AND FILTERS  
F 220 INSPECT AND CLEAN TEST STATIONS, SIMULATORS, MOCKUPS, OR  
LINE REPLACEABLE UNITS (LRU)  
J 445 CLEAN MTU TRANSPORTS  
J 447 DEMAGNETIZE MTU HEADS  
J 456 PERFORM MTU VACUUM ADJUSTMENTS  
J 470 TEST AND INSPECT CENPAC PUNCH TAPE READERS

**TASK NUMBER:** 61300

**TASK STATEMENT:** ,

PERFORM CENPAC SOFTWARE MAINTENANCE

**TASK NOTES:**

SOME OF THE TRACKING TOOLS ARE LOCALLY MANUFACTURED

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CENPAC  
CTK  
TRACKING TOOLS

**REFERENCES:**

33D7-12-21-1  
33D7-42-1-108-1  
33D7-47-12-2  
APPLICABLE LOCAL CHECKLIST

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A COPY CENPAC TAPES (J 446)  
A LOAD CENPAC BOOTSTRAPS (J 454)  
A LOAD EXECUTIVE PROGRAM  
A LOAD UTILITY PROGRAMS

**SKILLS:**

S INPUT MAINTENANCE CONTROL PANEL  
S INPUT TELETYPE  
S LOAD TAPES  
S OPERATE CENPAC  
S PREPARE NEW TAPE  
S SET UP PUNCH TAPE READER

**SKILLS:**

S USE COMMON HANDTOOLS  
S USE TRACKING TOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | J 446         |            | 3          | 9          | 10       | 2        | 4.62       |     |
| 451X6B | J 446         |            | 0          | 0          | 0        | 2        | 4.62       |     |
| 451X6  | J 446         |            | 2          | 5          | 5        | 2        | 4.62       |     |
| 451X6A | J 454         |            | 3          | 10         | 14       | 6        | 3.72       |     |
| 451X6B | J 454         |            | 4          | 5          | 3        | 6        | 3.72       |     |
| 451X6  | J 454         |            | 3          | 7          | 8        | 6        | 3.72       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

J 446 COPY CENTRAL PROCESSORS AND CONTROLLERS (CENPAC) TAPES  
J 454 LOAD CENPAC BOOTSTRAPS

**TASK NUMBER:** 61310

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN CENPAC TRUs

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CETP (A/E24T-111)

CTK

ESD PROTECTIVE EQUIPMENT .

EXTRACTION TOOL

FREQUENCY COUNTER

MULTIMETER

OSCILLOSCOPE

**REFERENCES:**

APPLICABLE SHOP SYSTEMS TO

12A-1-68-46

12A-1-68-76

12A-1-68-86

33D7-42-108-1

33D7-47-12-2

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A PERFORM DIAGNOSTIC TEST .

A PERFORM MEMORY CHECKS ON D-84 COMPUTER

**SKILLS:**

S CLEAR OUT PROGRAM

S CONNECT ADAPTERS AND CABLES

S LOAD TAPE

S OPERATE CENPAC

S PERFORM VISUAL INSPECTION

S USE CETP (A/E24T-111)

## SKILLS:

- S USE COMMON HANDTOOLS
- S USE EXTRACTION TOOL
- S USE FREQUENCY COUNTER
- S USE MULTIMETER
- S USE OSCILLOSCOPE

## KNOWLEDGE:

- K ANNOTATE FORMS
- K APPLY AC CIRCUIT THEORY OF OPERATION
- K APPLY AC MOTOR THEORY OF OPERATION
- K APPLY BIPOLAR JUNCTION TRANSISTOR THEORY OF OPERATION
- K APPLY CAPACITOR THEORY OF OPERATION
- K APPLY CENPAC THEORY OF OPERATION
- K APPLY CLAMPER CIRCUIT THEORY OF OPERATION
- K APPLY CMOS THEORY OF OPERATION
- K APPLY COMBINATIONAL LOGIC CIRCUIT THEORY OF OPERATION
- K APPLY DC CIRCUIT THEORY OF OPERATION
- K APPLY DC MOTOR THEORY OF OPERATION
- K APPLY ELECTROMECHANICAL SWITCH THEORY OF OPERATION
- K APPLY ESD PRECAUTIONS
- K APPLY FLIP-FLOP THEORY OF OPERATION
- K APPLY FREQUENCY SENSITIVE FILTER THEORY OF OPERATION
- K APPLY INDUCTOR THEORY OF OPERATION
- K APPLY INTEGRATED CIRCUIT THEORY OF OPERATION
- K APPLY LED THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION
- K APPLY LIMITER CIRCUIT ZENER DIODE THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT COUNTER THEORY OF OPERATION
- K APPLY LOGIC CIRCUIT REGISTER THEORY OF OPERATION
- K APPLY MAIN LOGIC GATE THEORY OF OPERATION
- K APPLY OPERATIONAL AMPLIFIER THEORY OF OPERATION
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY PHOTSENSITIVE DEVICE THEORY OF OPERATION
- K APPLY POWER SUPPLY FILTER THEORY OF OPERATION
- K APPLY POWER SUPPLY RECTIFIER THEORY OF OPERATION
- K APPLY POWER SUPPLY THEORY OF OPERATION
- K APPLY RCL CIRCUIT THEORY OF BASIC OPERATION
- K APPLY RCL CIRCUIT THEORY OF RESONANT OPERATION
- K APPLY RELAY THEORY OF OPERATION
- K APPLY RESISTOR THEORY OF OPERATION
- K APPLY SCR THEORY OF OPERATION
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY SOLENOID THEORY OF OPERATION
- K APPLY SOLID STATE DIODE THEORY OF OPERATION
- K APPLY TECHNICAL DATA
- K APPLY THEORY OF OPERATION OF COMPUTER MEMORIES
- K APPLY THREE-PHASE TRANSFORMER THEORY OF OPERATION
- K APPLY TRANSFORMER THEORY OF OPERATION
- K APPLY TTL THEORY OF OPERATION
- K APPLY VOLTAGE REGULATOR THEORY OF OPERATION
- K APPLY ZENER DIODE THEORY OF OPERATION

## KNOWLEDGE :

- K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING
- K ISOLATE FAULTY AC MOTORS
- K ISOLATE FAULTY BIPOLAR JUNCTION TRANSISTORS
- K ISOLATE FAULTY CAPACITORS
- K ISOLATE FAULTY CLAMPER CIRCUITS
- K ISOLATE FAULTY CMOSs
- K ISOLATE FAULTY COMBINATIONAL LOGIC CIRCUITS
- K ISOLATE FAULTY COMPUTER MEMORIES
- K ISOLATE FAULTY DC MOTORS
- K ISOLATE FAULTY FLIP-FLOPS
- K ISOLATE FAULTY FREQUENCY SENSITIVE FILTERS
- K ISOLATE FAULTY INDUCTORS
- K ISOLATE FAULTY INTEGRATED CIRCUITS
- K ISOLATE FAULTY LEDs
- K ISOLATE FAULTY LIMITER CIRCUIT DIODES
- K ISOLATE FAULTY LIMITER CIRCUIT ZENER DIODES
- K ISOLATE FAULTY LIMITER TRANSISTOR CIRCUITS
- K ISOLATE FAULTY LOGIC COUNTERS
- K ISOLATE FAULTY MAIN LOGIC GATES
- K ISOLATE FAULTY OPERATIONAL AMPLIFIERS
- K ISOLATE FAULTY PHOTSENSITIVE DEVICES
- K ISOLATE FAULTY POWER SUPPLIES
- K ISOLATE FAULTY POWER SUPPLY FILTERS
- K ISOLATE FAULTY POWER SUPPLY RECTIFIERS
- K ISOLATE FAULTY RCL CIRCUITS
- K ISOLATE FAULTY REGISTER LOGIC CIRCUITS
- K ISOLATE FAULTY RELAYS
- K ISOLATE FAULTY RESISTORS
- K ISOLATE FAULTY SCRs
- K ISOLATE FAULTY SOLENOIDS
- K ISOLATE FAULTY SOLID STATE DIODES
- K ISOLATE FAULTY THREE-PHASE TRANSFORMERS
- K ISOLATE FAULTY TRANSFORMERS
- K ISOLATE FAULTY TTLS
- K ISOLATE FAULTY VOLTAGE REGULATORS
- K ISOLATE FAULTY ZENER DIODES
- K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)
- K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)
- K TROUBLESHOOT AC CIRCUITS
- K TROUBLESHOOT AC MOTORS
- K TROUBLESHOOT BIPOLAR JUNCTION TRANSISTORS
- K TROUBLESHOOT CLAMPER CIRCUITS
- K TROUBLESHOOT CMOS LOGIC FAMILIES
- K TROUBLESHOOT COMBINATIONAL LOGIC CIRCUITS
- K TROUBLESHOOT COMPUTER MEMORIES
- K TROUBLESHOOT DC CIRCUITS
- K TROUBLESHOOT DC MOTORS
- K TROUBLESHOOT FLIP-FLOPS
- K TROUBLESHOOT FREQUENCY SENSITIVE FILTERS
- K TROUBLESHOOT INDUCTORS
- K TROUBLESHOOT LIMITER CIRCUIT DIODES
- K TROUBLESHOOT LIMITER CIRCUIT TRANSISTORS

**KNOWLEDGE:**

K TROUBLESHOOT LIMITER CIRCUIT ZENER DIODES  
 K TROUBLESHOOT LOGIC COUNTERS  
 K TROUBLESHOOT LOGIC REGISTERS  
 K TROUBLESHOOT MAIN LOGIC GATES  
 K TROUBLESHOOT OPERATIONAL AMPLIFIERS  
 K TROUBLESHOOT PHOTSENSITIVE DEVICES  
 K TROUBLESHOOT POWER SUPPLY CIRCUITS  
 K TROUBLESHOOT POWER SUPPLY FILTERS  
 K TROUBLESHOOT POWER SUPPLY RECTIFIERS  
 K TROUBLESHOOT RCL CIRCUITS  
 K TROUBLESHOOT RELAYS  
 K TROUBLESHOOT SOLENOIDS  
 K TROUBLESHOOT THREE-PHASE TRANSFORMERS  
 K TROUBLESHOOT TRANSFORMERS  
 K TROUBLESHOOT TTL LOGIC FAMILIES  
 K TROUBLESHOOT VOLTAGE REGULATORS  
 K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
 K VERIFY SUSPECTED FAULTY SRUS

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 232         |            | 0          | 9          | 15       | 9        | 6.35       |     |
| 451X6B | F 232         |            | 8          | 4          | 3        | 9        | 6.35       |     |
| 451X6  | F 232         |            | 3          | 6          | 9        | 9        | 6.35       |     |
| 451X6A | F 233         |            | 0          | 4          | 10       | 16       | 6.05       |     |
| 451X6B | F 233         |            | 12         | 14         | 23       | 16       | 6.05       |     |
| 451X6  | F 233         |            | 5          | 9          | 16       | 16       | 6.05       |     |
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | J 449         |            | 0          | 4          | 8        | 2        | 5.75       |     |
| 451X6B | J 449         |            | 0          | 0          | 0        | 2        | 5.75       |     |
| 451X6  | J 449         |            | 0          | 2          | 4        | 2        | 5.75       |     |
| 451X6A | J 450         |            | 0          | 6          | 7        | 3        | 6.74       |     |
| 451X6B | J 450         |            | 0          | 0          | 0        | 3        | 6.74       |     |
| 451X6  | J 450         |            | 0          | 3          | 4        | 3        | 6.74       |     |
| 451X6A | J 451         |            | 3          | 6          | 10       | 2        | 6.68       |     |
| 451X6B | J 451         |            | 0          | 0          | 0        | 2        | 6.68       |     |
| 451X6  | J 451         |            | 2          | 3          | 5        | 2        | 6.68       |     |
| 451X6A | J 452         |            | 0          | 7          | 9        | 2        | 6.74       |     |
| 451X6B | J 452         |            | 0          | 0          | 0        | 2        | 6.74       |     |
| 451X6  | J 452         |            | 0          | 3          | 5        | 2        | 6.74       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | J 453         |            | 3          | 9          | 11       | 3        | 6.63       |     |
| 451X6B | J 453         |            | 0          | 0          | 0        | 3        | 6.63       |     |
| 451X6  | J 453         |            | 2          | 5          | 6        | 3        | 6.63       |     |
| 451X6A | L 485         |            | 0          | 9          | 8        | 2        | 6.08       |     |
| 451X6B | L 485         |            | 0          | 0          | 0        | 2        | 6.08       |     |
| 451X6  | L 485         |            | 0          | 5          | 4        | 2        | 6.08       |     |

# **USAF JOB INVENTORY TASK STATEMENTS:**

F 232 ISOLATE MALFUNCTIONS IN MAGNETIC TAPE READERS  
 F 233 ISOLATE MALFUNCTIONS IN PUNCH TAPE READERS  
 F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
 J 449 ISOLATE MALFUNCTIONS IN CENPAC TELETYPEWRITERS  
 J 450 ISOLATE MALFUNCTIONS IN CENPACs USING COMPUTER EXERCISE  
 TEST PANELS (CTP)  
 J 451 ISOLATE MALFUNCTIONS IN CENPACs USING DIAGNOSTIC TAPES AND  
 SCHEMATICS  
 J 452 ISOLATE MALFUNCTIONS IN I/O MODULES  
 J 453 ISOLATE MALFUNCTIONS IN MTUs  
 L 485 ISOLATE MALFUNCTIONS IN CENPAC MODULE TESTERS

**TASK NUMBER:** 61320

**TASK STATEMENT:**

REPAIR CENPAC

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CETP (A/E24T-111)  
CLEANING SOLVENTS AND BRUSHES  
CTK  
ESD PROTECTIVE EQUIPMENT  
EXTRACTION TOOL  
FREQUENCY COUNTER  
MULTIMETER  
OSCILLOSCOPE

**REFERENCES:**

12A-1-68-46  
12A-1-68-76  
12A-1-68-86

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN CENPAC MTUs (TASK NUMBER: 61330)  
A ALIGN CENPAC TRUs  
A CLEAN CONTACTS (F 210)  
A ORDER PARTS  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)  
A REMOVE AND REPLACE SRUs (TASK NUMBER: 61390)  
A REMOVE AND REPLACE TRUs (TASK NUMBER: 61380)  
A REPAIR WIRING (TASK NUMBER: 61440)  
A RESEAT SFUs

**SKILLS:**

S CONNECT ADAPTERS AND CABLES  
 S OPERATE CENPAC  
 S OPERATE TEST STATION  
 S PERFORM VISUAL INSPECTION  
 S USE CETP (A/E24T-111)  
 S USE COMMON HANDTOOLS  
 S USE EXTRACTION TOOL  
 S USE FREQUENCY COUNTER  
 S USE MULTIMETER  
 S USE OSCILLOSCOPE

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY ESD PRECAUTIONS  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | J 439         |            | 0          | 4          | 8        | 1        | 5.42       |     |
| 451X6B | J 439         |            | 0          | 0          | 0        | 1        | 5.42       |     |
| 451X6  | J 439         |            | 0          | 2          | 4        | 1        | 5.42       |     |
| 451X6A | J 440         |            | 0          | 3          | 6        | 1        | 5.42       |     |
| 451X6B | J 440         |            | 0          | 0          | 0        | 1        | 5.42       |     |
| 451X6  | J 440         |            | 0          | 2          | 3        | 1        | 5.42       |     |
| 451X6A | J 444         |            | 0          | 6          | 6        | 2        | 6.56       |     |
| 451X6B | J 444         |            | 0          | 0          | 0        | 2        | 6.56       |     |
| 451X6  | J 444         |            | 0          | 3          | 3        | 2        | 6.56       |     |
| 451X6A | L 484         |            | 0          | 9          | 8        | 2        | 5.76       |     |
| 451X6B | L 484         |            | 0          | 0          | 0        | 2        | 5.76       |     |
| 451X6  | L 484         |            | 0          | 5          | 4        | 2        | 5.76       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 210 CLEAN CONTACTS  
 J 439 ALIGN COMPUTER POWER SUPPLIES  
 J 440 ALIGN INPUT/OUTPUT (I/O) POWER SUPPLIES  
 J 444 ALIGN TELETYPEWRITERS  
 L 484 ALIGN CENTRAL PROCESSORS AND CONTROLLERS (CENPAC) NETWORK  
 MODULE TESTERS

**TASK NUMBER:** 61330

**TASK STATEMENT:**

ALIGN CENPAC MTUs

**TASK NOTES:**

SOME OF THE TRACKING TOOLS ARE LOCALLY MANUFACTURED

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CETP (A/E24T-111)  
CTK  
FREQUENCY COUNTER  
HEAD DEMAGNETIZER  
MAGNETIC TAPE  
MULTIMETER  
OSCILLOSCOPE  
TENSION GAUGE  
TEST TAPE  
TRACKING TOOLS  
VACUUM GAUGE

**REFERENCES:**

33D7-47-12-2  
33DA3-53-2  
33D7-61-43-1

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN MTU CAPSTANS (J 441)  
A ALIGN MTU CIRCUIT CARDS (J 442)  
A ALIGN MTU POWER SUPPLIES (J 443)  
A PERFORM DATA ELECTRONICS ADJUSTMENTS  
A PERFORM MTU HEADGATE ADJUSTMENTS (J 455)

**SKILLS:**

S CONNECT ADAPTERS AND CABLES  
S DEMAGNETIZE HEADS  
S LOAD MAGNETIC TAPE  
S OPERATE CENPAC  
S PERFORM VISUAL INSPECTION  
S USE COMMON HANDTOOLS  
S USE FREQUENCY COUNTER  
S USE MULTIMETER TO MEASURE VOLTAGES  
S USE OSCILLOSCOPE TO MEASURE VOLTAGES AND PULSE WIDTH  
S USE TENSION GAUGE  
S USE TEST TAPE  
S USE TRACKING TOOLS  
S USE VACUUM GAUGE

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | J 441         |            | 3          | 8          | 10       | 2        | 7.01       |     |
| 451X6B | J 441         |            | 0          | 0          | 0        | 2        | 7.01       |     |
| 451X6  | J 441         |            | 2          | 4          | 5        | 2        | 7.01       |     |
| 451X6A | J 442         |            | 0          | 6          | 9        | 2        | 6.23       |     |
| 451X6B | J 442         |            | 0          | 0          | 0        | 2        | 6.23       |     |
| 451X6  | J 442         |            | 0          | 3          | 5        | 2        | 6.23       |     |
| 451X6A | J 443         |            | 0          | 6          | 9        | 2        | 5.81       |     |
| 451X6B | J 443         |            | 0          | 0          | 0        | 2        | 5.81       |     |
| 451X6  | J 443         |            | 0          | 3          | 5        | 2        | 5.81       |     |
| 451X6A | J 455         |            | 0          | 7          | 8        | 3        | 5.54       |     |
| 451X6B | J 455         |            | 0          | 0          | 0        | 3        | 5.54       |     |
| 451X6  | J 455         |            | 0          | 3          | 4        | 3        | 5.54       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

J 441 ALIGN MAGNETIC TAPE UNITS (MTU) CAPSTANS  
J 442 ALIGN MTU CIRCUIT CARDS  
J 443 ALIGN MTU POWER SUPPLIES  
J 455 PERFORM MTU HEADGATE ADJUSTMENTS

**TASK NUMBER:** 61340

**TASK STATEMENT:**

UTILIZE SCHEMATIC DIAGRAMS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**KNOWLEDGE:**

K APPLY AC CIRCUIT THEORY OF OPERATION  
K APPLY AC GENERATOR THEORY OF OPERATION  
K APPLY AC MOTOR THEORY OF OPERATION  
K APPLY ALTERNATOR THEORY OF OPERATION  
K APPLY AM MODULATION TRANSMITTER THEORY OF OPERATION  
K APPLY AM RECEIVER THEORY OF OPERATION  
K APPLY ANTENNA THEORY OF OPERATION  
K APPLY APPROXIMATION A/D CONVERTER THEORY OF OPERATION  
K APPLY BIPOLAR JUNCTION TRANSISTOR THEORY OF OPERATION  
K APPLY CAPACITOR THEORY OF OPERATION  
K APPLY CHOPPER (SYNCHROUS VIBRATOR) THEORY OF OPERATION  
K APPLY CLAMPER CIRCUIT THEORY OF OPERATION  
K APPLY CMOS THEORY OF OPERATION  
K APPLY COMBINATIONAL LOGIC CIRCUIT THEORY OF OPERATION  
K APPLY CRT THEORY OF OPERATION  
K APPLY DC CIRCUIT THEORY OF OPERATION  
K APPLY DC GENERATOR THEORY OF OPERATION  
K APPLY DC MOTOR THEORY OF OPERATION  
K APPLY DISPLAY TUBE THEORY OF OPERATION  
K APPLY ELECTRON TUBE AMPLIFIER THEORY OF OPERATION  
K APPLY ELECTRON TUBE THEORY OF OPERATION  
K APPLY FLIP-FLOP THEORY OF OPERATION  
K APPLY FM RECEIVER THEORY OF OPERATION  
K APPLY FM TRANSMITTER THEORY OF OPERATION  
K APPLY FREQUENCY SENSITIVE FILTER THEORY OF OPERATION  
K APPLY INDUCTOR THEORY OF OPERATION  
K APPLY INTEGRATED CIRCUIT THEORY OF OPERATION  
K APPLY JFET THEORY OF OPERATION

## KNOWLEDGE :

K APPLY LCD THEORY OF OPERATION  
K APPLY LED THEORY OF OPERATION  
K APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATION  
K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION  
K APPLY LIMITER CIRCUIT ZENER DIODE THEORY OF OPERATION  
K APPLY LOGIC CIRCUIT COUNTER THEORY OF OPERATION  
K APPLY LOGIC CIRCUIT REGISTER THEORY OF OPERATION  
K APPLY MAGNETIC AMPLIFIER THEORY OF OPERATION  
K APPLY MAIN LOGIC GATE THEORY OF OPERATION  
K APPLY MICROPROCESSOR THEORY OF OPERATION  
K APPLY MICROWAVE OSCILLATOR OR AMPLIFIER THEORY OF OPERATION  
K APPLY MOSFET THEORY OF OPERATION  
K APPLY MULTIVIBRATOR CIRCUIT THEORY OF OPERATION  
K APPLY OPERATIONAL AMPLIFIER THEORY OF OPERATION  
K APPLY OSCILLATOR CIRCUIT THEORY OF OPERATION  
K APPLY PHOTSENSITIVE DEVICE THEORY OF OPERATION  
K APPLY POWER SUPPLY FILTER THEORY OF OPERATION  
K APPLY POWER SUPPLY RECTIFIER THEORY OF OPERATION  
K APPLY POWER SUPPLY THEORY OF OPERATION  
K APPLY PULSE MODULATION RECEIVER THEORY OF OPERATION  
K APPLY PULSE MODULATION TRANSMITTER THEORY OF OPERATION  
K APPLY RAMP A/D CONVERTER THEORY OF OPERATION  
K APPLY RCL CIRCUIT THEORY OF BASIC OPERATION  
K APPLY RCL CIRCUIT THEORY OF RESONANT OPERATION  
K APPLY RELAY THEORY OF OPERATION  
K APPLY RESISTOR THEORY OF OPERATION  
K APPLY RESONANT CAVITY THEORY OF OPERATION  
K APPLY SCR THEORY OF OPERATION  
K APPLY SINGLE SIDEBAND TRANSMITTER THEORY OF OPERATION  
K APPLY SOLENOID THEORY OF OPERATION  
K APPLY SOLID STATE DIODE THEORY OF OPERATION  
K APPLY SPEAKER THEORY OF OPERATION  
K APPLY SYNCHRO-SERVO THEORY OF OPERATION  
K APPLY TECHNICAL DATA  
K APPLY THREE-PHASE TRANSFORMER THEORY OF OPERATION  
K APPLY TRANSDUCER THEORY OF OPERATION  
K APPLY TRANSFORMER THEORY OF OPERATION  
K APPLY TRANSISTOR AMPLIFIER COUPLING CIRCUIT THEORY OF OPERATION  
K APPLY TRANSISTOR AMPLIFIER CIRCUIT THEORY OF OPERATION  
K APPLY TRANSISTOR AMPLIFIER STABILIZATION CIRCUIT THEORY OF OPERATION  
K APPLY TRANSMISSION LINE THEORY OF OPERATION  
K APPLY TTL THEORY OF OPERATION  
K APPLY TUNNEL DIODE THEORY OF OPERATION  
K APPLY UJT THEORY OF OPERATION  
K APPLY VOLTAGE REGULATOR THEORY OF OPERATION  
K APPLY WAVEGUIDE THEORY OF OPERATION  
K APPLY WAVESHAPING CIRCUIT THEORY OF OPERATION  
K APPLY WEIGHTED RESISTOR D/A CONVERTER THEORY OF OPERATION  
K APPLY ZENER DIODE THEORY OF OPERATION  
K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)

**TASK NUMBER:** 61350

**TASK STATEMENT:**

TRACE SIGNALS THROUGH INTERCONNECTS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

**CUES:**

DURING FAULT ISOLATION

**STANDARDS:**

IAW REFERENCES

**KNOWLEDGE:**

K APPLY TECHNICAL DATA

K LOCATE PINS IN CANNON PLUGS

K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)

**TASK NUMBER:** 61360

**TASK STATEMENT:**

DETERMINE WHETHER MALFUNCTION IS IN TEST STATION, LRU, OR ADAPTER

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
ESD PROTECTIVE EQUIPMENT  
MEASUREMENT DEVICE (AS APPROPRIATE)  
SHOP STANDARD (IF AVAILABLE)

**REFERENCES:**

APPLICABLE SHOP SYSTEMS TO  
APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CHECK FOR CONTINUITY  
A CHECK PHASE RELATIONSHIPS  
A MEASURE RF OUTPUTS .  
A MEASURE VOLTAGES  
A MEASURE WAVEFORM CHARACTERISTICS

**SKILLS:**

S INSTALL SHOP STANDARD  
S USE COMMON HANDTOOLS  
S USE MEASUREMENT DEVICE

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY ESD PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING  
K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
K VERIFY SUSPECTED FAULTY EQUIPMENT

**TASK NUMBER:** 61370

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN TEST STATION THROUGH INTERCONNECTS OF AN  
INSTALLED LRU (F 236)

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

ANGLE POSITION INDICATOR  
ATSCS TEST SET  
COMPUTER  
CTK  
DIGITAL WORD GENERATOR  
DTS  
ESD PROTECTIVE EQUIPMENT  
FREQUENCY COUNTER  
GATS  
IEEE BUS MONITOR/ANALYZER  
LOGIC PROBE  
MICROWAVE PULSE COUNTER  
MULTIFUNCTION UNIT  
MULTIMETER  
OSCILLOSCOPE  
PHASE ANGLE METER  
POWER METER  
POWER SUPPLY  
PROBE  
PULSE GENERATOR  
PULSE/FUNCTION GENERATOR  
RF ID  
RF POWER METER  
SCALER NETWORK ANALYZER  
SIGNATURE MULTIMETER  
SPECTRUM ANALYZER  
SWITCHING ID  
SWR METER  
SYNCHRO BRIDGE  
SYNCHRO STANDARD  
SYNTHESIZED SWEEPER  
TEST STATION  
TIMER COUNTER  
TWT  
TWT AMPLIFIER  
VARIAC

## REFERENCES:

APPLICABLE TEST PROCEDURES TO  
APPLICABLE SHOP SYSTEMS TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

## CONDITIONS:

AIR CONDITIONED ENVIRONMENT

## CUES:

DETECTED MALFUNCTION

## STANDARDS:

IAW REFERENCES

## SKILLS:

- S LOAD COMPUTER PROGRAMS
- S OPERATE TEST STATION
- S PERFORM GATS SELF-TEST
- S PERFORM PULSE GENERATOR SELF-TEST
- S USE ANGLE POSITION INDICATOR TO VERIFY SYNCHRO ALIGNMENTS
- S USE ATSCS TEST SET TO ENSURE CALIBRATION OF ENTIRE TEST STATION
- S USE COMMON HANDTOOLS
- S USE COMPUTER TO VERIFY MEASUREMENT AGAINST UPPER AND LOWER LIMITS
- S USE DIGITAL WORD GENERATOR FOR CONTINUITY TEST AND DIGITAL WRAP AROUND TEST
- S USE DTS TO PERFORM DTS, SELF-TEST
- S USE FREQUENCY COUNTER TO VERIFY RISE/FALL/PULSE/RF SIGNALS
- S USE IEEE BUS MONITOR/ANALYZER TO VERIFY IEEE LINES
- S USE LOGIC PROBES TO VERIFY PATH CONTINUITY
- S USE MICROWAVE PULSE COUNTER TO VERIFY TWT AND SYNTHESIZED SWEEPER
- S USE MULTIFUNCTION UNIT TO PRODUCE AND MEASURE VIDEO AND PULSE DC SIGNALS
- S USE MULTIMETER TO VERIFY POWER SUPPLY AND PATH CONTINUITY
- S USE OSCILLOSCOPE TO VERIFY VIDEO AND RF SIGNALS
- S USE PHASE ANGLE METER TO VERIFY AC POWER SUPPLY
- S USE POWER METER TO VERIFY RF SIGNALS
- S USE POWER SUPPLY TO APPLY POWER TO TRUs FOR SELF-VERIFICATION
- S USE PROBE WITH POWER METER
- S USE PULSE/FUNCTION GENERATOR FOR SELF-VERIFICATION
- S USE RF ID TO VERIFY VARIOUS RF PATHS
- S USE RF POWER METER TO VERIFY RF SIGNALS
- S USE SCALER NETWORK ANALYZER FOR SELF-VERIFICATION
- S USE SIGNATURE MULTIMETER TO VERIFY IEEE LINES
- S USE SPECTRUM ANALYZER TO VERIFY RF GENERATION DEVICES
- S USE SWITCHING ID TO SWITCH SIGNALS THROUGHOUT PATHS IN TEST STATION
- S USE SWR METER TO VERIFY TWT AMPLIFIER

**SKILLS:**

S USE SYNCHRO BRIDGE TO VERIFY GATS  
 S USE SYNCHRO STANDARD TO VERIFY GATS  
 S USE SYNTHESIZED SWEEPER TO VERIFY RF ID, RF POWER METERS  
 S USE TIMER COUNTER TO VERIFY RISE/FALL/PULSE/RF SIGNALS  
 S USE TWT AMPLIFIER FOR SELF-VERIFICATION  
 S USE TWT FOR SELF-VERIFICATION  
 S USE VARIAC TO ADJUST AC VOLTAGE

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY ESD PRECAUTIONS  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY TECHNICAL DATA  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING  
 K ISOLATE FAULTY AC CIRCUITS  
 K ISOLATE FAULTY AM TRANSMITTERS  
 K ISOLATE FAULTY COMPUTER MAJOR UNITS  
 K ISOLATE FAULTY COMPUTER PERIPHERAL DEVICES  
 K ISOLATE FAULTY COMPUTER SUBASSEMBLIES  
 K ISOLATE FAULTY DC CIRCUITS  
 K ISOLATE FAULTY DC GENERATORS  
 K ISOLATE FAULTY ELECTRON TUBE AMPLIFIERS  
 K ISOLATE FAULTY FM MODULATION TRANSMITTERS  
 K ISOLATE FAULTY MICROPROCESSORS  
 K ISOLATE FAULTY MICROWAVE OSCILLATORS OR AMPLIFIERS  
 K ISOLATE FAULTY POWER SUPPLIES  
 K ISOLATE FAULTY PULSE MODULATION TRANSMITTERS  
 K ISOLATE FAULTY RELAYS  
 K ISOLATE FAULTY RESISTORS  
 K ISOLATE FAULTY SINGLE SIDEBAND TRANSMITTERS  
 K ISOLATE FAULTY WAVEGUIDES  
 K PERFORM HEXADECIMAL CONVERSIONS  
 K PERFORM OCTAL CONVERSIONS  
 K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)  
 K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
 K TROUBLESHOOT AC CIRCUITS  
 K TROUBLESHOOT DC CIRCUITS  
 K USE COMPUTER PROGRAMMING LANGUAGE  
 K USE METRIC NOTATION  
 K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)  
 K WRITE OR DEBUG COMPUTER PROGRAMS

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 236         |            | 55         | 63         | 68       | 36       | 6.54       |     |
| 451X6B | F 236         |            | 27         | 52         | 49       | 36       | 6.54       |     |
| 451X6  | F 236         |            | 45         | 58         | 59       | 36       | 6.54       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 236 ISOLATE MALFUNCTIONS IN TEST STATIONS THROUGH INTERCONNECTS  
OF AN INSTALLED LRU

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES

**TASK NUMBER:** 61380

**TASK STATEMENT:**

REMOVE AND REPLACE TRUs (F 275)

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK

HOIST

**REFERENCES:**

APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

APPLICABLE IPB

**CONDITIONS:**

SOME TRUs REQUIRE TWO PERSON LIFT

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A REMOVE POWER

A REMOVE AND REPLACE HARDWARE

A REMOVE GROUNDSTRAPS

**SKILLS:**

S USE COMMON HANDTOOLS

S USE HOIST TO LIFT TRU (IF REQUIRED)

**KNOWLEDGE:**

K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS

K APPLY SHOP SAFETY PROCEDURES

K APPLY TECHNICAL DATA

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 261         |            | 32         | 47         | 52       | 34       | 4.01       |     |
| 451X6B | F 261         |            | 62         | 59         | 66       | 34       | 4.01       |     |
| 451X6  | F 261         |            | 43         | 52         | 59       | 34       | 4.01       |     |
| 451X6A | F 262         |            | 37         | 51         | 60       | 38       | 3.95       |     |
| 451X6B | F 262         |            | 62         | 65         | 72       | 38       | 3.95       |     |
| 451X6  | F 262         |            | 46         | 57         | 66       | 38       | 3.95       |     |
| 451X6A | F 275         |            | 66         | 64         | 62       | 41       | 2.99       |     |
| 451X6B | F 275         |            | 31         | 47         | 51       | 41       | 2.99       |     |
| 451X6  | F 275         |            | 52         | 56         | 57       | 41       | 2.99       |     |
| 451X6A | G 307         |            | 39         | 53         | 51       | 20       | 2.67       |     |
| 451X6B | G 307         |            | 4          | 11         | 13       | 20       | 2.67       |     |
| 451X6  | G 307         |            | 25         | 32         | 33       | 20       | 2.67       |     |
| 451X6A | G 308         |            | 34         | 48         | 44       | 18       | 2.88       |     |
| 451X6B | G 308         |            | 0          | 7          | 7        | 18       | 2.88       |     |
| 451X6  | G 308         |            | 20         | 28         | 26       | 18       | 2.88       |     |
| 451X6A | G 309         |            | 34         | 49         | 47       | 20       | 2.98       |     |
| 451X6B | G 309         |            | 8          | 14         | 15       | 20       | 2.98       |     |
| 451X6  | G 309         |            | 23         | 32         | 32       | 20       | 2.98       |     |
| 451X6A | G 310         |            | 32         | 46         | 46       | 19       | 3.10       |     |
| 451X6B | G 310         |            | 0          | 12         | 10       | 19       | 3.10       |     |
| 451X6  | G 310         |            | 18         | 29         | 29       | 19       | 3.10       |     |
| 451X6A | G 311         |            | 24         | 32         | 29       | 16       | 2.87       |     |
| 451X6B | G 311         |            | 8          | 16         | 16       | 16       | 2.87       |     |
| 451X6  | G 311         |            | 17         | 24         | 23       | 16       | 2.87       |     |
| 451X6A | G 312         |            | 11         | 16         | 20       | 16       | 3.08       |     |
| 451X6B | G 312         |            | 8          | 19         | 18       | 16       | 3.08       |     |
| 451X6  | G 312         |            | 9          | 17         | 19       | 16       | 3.08       |     |
| 451X6A | G 313         |            | 37         | 49         | 46       | 18       | 2.86       |     |
| 451X6B | G 313         |            | 12         | 14         | 11       | 18       | 2.86       |     |
| 451X6  | G 313         |            | 26         | 32         | 29       | 18       | 2.86       |     |
| 451X6A | G 314         |            | 37         | 56         | 57       | 22       | 3.54       |     |
| 451X6B | G 314         |            | 12         | 15         | 15       | 22       | 3.54       |     |
| 451X6  | G 314         |            | 26         | 36         | 37       | 22       | 3.54       |     |
| 451X6A | G 315         |            | 18         | 29         | 26       | 8        | 3.12       |     |
| 451X6B | G 315         |            | 0          | 1          | 1        | 8        | 3.12       |     |
| 451X6  | G 315         |            | 11         | 15         | 14       | 8        | 3.12       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | G 316         |            | 13         | 27         | 26       | 7        | 3.20       |     |
| 451X6B | G 316         |            | 0          | 1          | 1        | 7        | 3.20       |     |
| 451X6  | G 316         |            | 8          | 14         | 14       | 7        | 3.20       |     |
| 451X6A | G 317         |            | 37         | 49         | 47       | 18       | 2.95       |     |
| 451X6B | G 317         |            | 12         | 12         | 8        | 18       | 2.95       |     |
| 451X6  | G 317         |            | 26         | 31         | 29       | 18       | 2.95       |     |
| 451X6A | G 318         |            | 42         | 57         | 57       | 22       | 3.58       |     |
| 451X6B | G 318         |            | 12         | 13         | 12       | 22       | 3.58       |     |
| 451X6  | G 318         |            | 29         | 35         | 35       | 22       | 3.58       |     |
| 451X6A | G 319         |            | 24         | 34         | 31       | 8        | 3.28       |     |
| 451X6B | G 319         |            | 4          | 5          | 5        | 8        | 3.28       |     |
| 451X6  | G 319         |            | 15         | 20         | 19       | 8        | 3.28       |     |
| 451X6A | G 320         |            | 21         | 32         | 33       | 6        | 3.31       |     |
| 451X6B | G 320         |            | 0          | 1          | 1        | 6        | 3.31       |     |
| 451X6  | G 320         |            | 12         | 17         | 18       | 6        | 3.31       |     |
| 451X6A | G 321         |            | 16         | 28         | 28       | 6        | 2.88       |     |
| 451X6B | G 321         |            | 0          | 0          | 1        | 6        | 2.88       |     |
| 451X6  | G 321         |            | 9          | 14         | 15       | 6        | 2.88       |     |
| 451X6A | H 399         |            | 8          | 7          | 8        | 5        | 4.16       |     |
| 451X6B | H 399         |            | 0          | 1          | 2        | 5        | 4.16       |     |
| 451X6  | H 399         |            | 5          | 4          | 5        | 5        | 4.16       |     |
| 451X6A | H 402         |            | 11         | 7          | 6        | 3        | 4.18       |     |
| 451X6B | H 402         |            | 0          | 1          | 1        | 3        | 4.18       |     |
| 451X6  | H 402         |            | 6          | 4          | 4        | 3        | 4.18       |     |
| 451X6A | H 405         |            | 11         | 7          | 6        | 4        | 4.32       |     |
| 451X6B | H 405         |            | 0          | 1          | 2        | 4        | 4.32       |     |
| 451X6  | H 405         |            | 6          | 4          | 4        | 4        | 4.32       |     |
| 451X6A | H 406         |            | 3          | 2          | 6        | 2        | 3.86       |     |
| 451X6B | H 406         |            | 0          | 0          | 1        | 2        | 3.86       |     |
| 451X6  | H 406         |            | 2          | 1          | 4        | 2        | 3.86       |     |
| 451X6A | H 409         |            | 11         | 13         | 8        | 4        | 4.24       |     |
| 451X6B | H 409         |            | 4          | 4          | 2        | 4        | 4.24       |     |
| 451X6  | H 409         |            | 8          | 8          | 5        | 4        | 4.24       |     |
| 451X6A | H 410         |            | 8          | 4          | 3        | 4        | 5.91       |     |
| 451X6B | H 410         |            | 0          | 0          | 0        | 4        | 5.91       |     |
| 451X6  | H 410         |            | 5          | 2          | 2        | 4        | 5.91       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | J 459         |            | 3          | 3          | 7        | 2        | 3.86       |     |
| 451X6B | J 459         |            | 0          | 0          | 0        | 2        | 3.86       |     |
| 451X6  | J 459         |            | 2          | 2          | 4        | 2        | 3.86       |     |
| 451X6A | J 462         |            | 3          | 4          | 9        | 3        | 3.34       |     |
| 451X6B | J 462         |            | 0          | 0          | 0        | 3        | 3.34       |     |
| 451X6  | J 462         |            | 2          | 2          | 5        | 3        | 3.34       |     |
| 451X6A | J 463         |            | 3          | 7          | 10       | 2        | 3.56       |     |
| 451X6B | J 463         |            | 0          | 0          | 0        | 2        | 3.56       |     |
| 451X6  | J 463         |            | 2          | 3          | 5        | 2        | 3.56       |     |
| 451X6A | K 477         |            | 3          | 4          | 7        | 1        | 4.15       |     |
| 451X6B | K 477         |            | 0          | 0          | 0        | 1        | 4.15       |     |
| 451X6  | K 477         |            | 2          | 2          | 4        | 1        | 4.15       |     |
| 451X6A | L 492         |            | 0          | 7          | 6        | 2        | 4.20       |     |
| 451X6B | L 492         |            | 0          | 0          | 0        | 2        | 4.20       |     |
| 451X6  | L 492         |            | 0          | 3          | 3        | 2        | 4.20       |     |
| 451X6A | L 495         |            | 5          | 6          | 4        | 1        | 3.51       |     |
| 451X6B | L 495         |            | 0          | 0          | 0        | 1        | 3.51       |     |
| 451X6  | L 495         |            | 3          | 3          | 2        | 1        | 3.51       |     |
| 451X6A | L 498         |            | 0          | 7          | 6        | 2        | 3.62       |     |
| 451X6B | L 498         |            | 0          | 0          | 0        | 2        | 3.62       |     |
| 451X6  | L 498         |            | 0          | 3          | 3        | 2        | 3.62       |     |
| 451X6A | L 501         |            | 5          | 4          | 5        | 2        | 3.80       |     |
| 451X6B | L 501         |            | 0          | 0          | 0        | 2        | 3.80       |     |
| 451X6  | L 501         |            | 3          | 2          | 3        | 2        | 3.80       |     |
| 451X6A | M 513         |            | 11         | 10         | 7        | 1        | 3.52       |     |
| 451X6B | M 513         |            | 0          | 0          | 1        | 1        | 3.52       |     |
| 451X6  | M 513         |            | 8          | 6          | 4        | 1        | 3.52       |     |
| 451X6A | M 516         |            | 3          | 3          | 4        | 1        | 3.57       |     |
| 451X6B | M 516         |            | 0          | 0          | 0        | 1        | 3.57       |     |
| 451X6  | M 516         |            | 2          | 2          | 2        | 1        | 3.57       |     |
| 451X6A | M 519         |            | 5          | 3          | 2        | 1        | 3.43       |     |
| 451X6B | M 519         |            | 0          | 0          | 0        | 1        | 3.43       |     |
| 451X6  | M 519         |            | 3          | 2          | 1        | 1        | 3.43       |     |
| 451X6A | N 553         |            | 0          | 1          | 0        | 0        | 4.91       |     |
| 451X6B | N 553         |            | 0          | 0          | 0        | 0        | 4.91       |     |
| 451X6  | N 553         |            | 0          | 1          | 0        | 0        | 4.91       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | N 556         |            | 3          | 3          | 1        | 0        | 4.18       |     |
| 451X6B | N 556         |            | 0          | 0          | 0        | 0        | 4.18       |     |
| 451X6  | N 556         |            | 2          | 2          | 0        | 0        | 4.18       |     |
| 451X6A | N 559         |            | 8          | 12         | 14       | 3        | 3.50       |     |
| 451X6B | N 559         |            | 0          | 0          | 0        | 3        | 3.50       |     |
| 451X6  | N 559         |            | 5          | 6          | 7        | 3        | 3.50       |     |
| 451X6A | P 589         |            | 11         | 12         | 14       | 3        | 3.62       |     |
| 451X6B | P 589         |            | 0          | 0          | 0        | 3        | 3.62       |     |
| 451X6  | P 589         |            | 6          | 6          | 7        | 3        | 3.62       |     |
| 451X6A | Q 599         |            | 0          | 1          | 2        | 1        | 3.81       |     |
| 451X6B | Q 599         |            | 0          | 0          | 0        | 1        | 3.81       |     |
| 451X6  | Q 599         |            | 0          | 1          | 1        | 1        | 3.81       |     |
| 451X6A | Q 602         |            | 3          | 3          | 6        | 1        | 3.86       |     |
| 451X6B | Q 602         |            | 0          | 0          | 0        | 1        | 3.86       |     |
| 451X6  | Q 602         |            | 2          | 2          | 3        | 1        | 3.86       |     |
| 451X6A | R 609         |            | 5          | 8          | 10       | 4        | 3.76       |     |
| 451X6B | R 609         |            | 0          | 0          | 0        | 4        | 3.76       |     |
| 451X6  | R 609         |            | 3          | 4          | 5        | 4        | 3.76       |     |
| 451X6A | T 868         |            | 3          | 1          | 2        | 1        | 4.17       |     |
| 451X6B | T 868         |            | 0          | 0          | 0        | 1        | 4.17       |     |
| 451X6  | T 868         |            | 2          | 1          | 1        | 1        | 4.17       |     |
| 451X6A | U1024         |            | 0          | 0          | 0        | 9        | 3.90       |     |
| 451X6B | U1024         |            | 8          | 14         | 18       | 9        | 3.90       |     |
| 451X6  | U1024         |            | 3          | 7          | 9        | 9        | 3.90       |     |
| 451X6A | V1132         |            | 0          | 0          | 0        | 3        | 3.74       |     |
| 451X6B | V1132         |            | 8          | 9          | 10       | 3        | 3.74       |     |
| 451X6  | V1132         |            | 3          | 5          | 5        | 3        | 3.74       |     |
| 451X6A | V1136         |            | 0          | 0          | 0        | 0        | 4.12       |     |
| 451X6B | V1136         |            | 0          | 0          | 0        | 0        | 4.12       |     |
| 451X6  | V1136         |            | 0          | 0          | 0        | 0        | 4.12       |     |
| 451X6A | V1139         |            | 0          | 0          | 0        | 0        | 3.92       |     |
| 451X6B | V1139         |            | 0          | 1          | 1        | 0        | 3.92       |     |
| 451X6  | V1139         |            | 0          | 1          | 0        | 0        | 3.92       |     |
| 451X6A | X1294         |            | 0          | 0          | 0        | 6        | 4.58       |     |
| 451X6B | X1294         |            | 0          | 9          | 9        | 6        | 4.58       |     |
| 451X6  | X1294         |            | 0          | 5          | 4        | 6        | 4.58       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | Z1366         |            | 0          | 0          | 0        | 2        | 6.05       |     |
| 451X6B | Z1366         |            | 0          | 9          | 12       | 2        | 6.05       |     |
| 451X6  | Z1366         |            | 0          | 5          | 6        | 2        | 6.05       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 261 REMOVE OR REPLACE HIGH VOLTAGE POWER SUPPLIES  
 F 262 REMOVE OR REPLACE LOW VOLTAGE POWER SUPPLIES  
 F 275 REMOVE OR REPLACE TESTER REPLACEABLE UNITS (TRU)  
 G 307 REMOVE OR REPLACE COUNTER TIMERS  
 G 308 REMOVE OR REPLACE DATACs  
 G 309 REMOVE OR REPLACE LOGIC POWER SUPPLIES  
 G 310 REMOVE OR REPLACE MICROLOGIC POWER SUPPLIES  
 G 311 REMOVE OR REPLACE PPGs  
 G 312 REMOVE OR REPLACE RF GENERATORS  
 G 313 REMOVE OR REPLACE STIMULUS CONTROLLERS  
 G 314 REMOVE OR REPLACE STIMULUS RELAYS  
 G 315 REMOVE OR REPLACE SYNCHRO BRIDGES  
 G 316 REMOVE OR REPLACE SYNCHRO STANDARDS  
 G 317 REMOVE OR REPLACE TEST POINT CONTROLLERS  
 G 318 REMOVE OR REPLACE TEST POINT RELAYS  
 G 319 REMOVE OR REPLACE TRANSFORMER/CONVERTERS  
 G 320 REMOVE OR REPLACE TRYGON POWER SUPPLIES  
 G 321 REMOVE OR REPLACE TRYGON POWER SUPPLY CONTROLLERS  
 H 399 REMOVE OR REPLACE AIS/R COMPUTER TEST STATION TRUs  
 H 402 REMOVE OR REPLACE AIS/R EW TEST STATION TRUs  
 H 405 REMOVE OR REPLACE AIS/R VIDEO TEST STATION TRUs  
 H 406 REMOVE OR REPLACE ATSCS TRUs  
 H 409 REMOVE OR REPLACE RF TEST STATION TRUs  
 H 410 REMOVE OR REPLACE VIRGINIA PATCH PANELS  
 J 459 REMOVE OR REPLACE CENPAC PUNCH TAPE READERS  
 J 462 REMOVE OR REPLACE CENPAC TELETYPEWRITERS  
 J 463 REMOVE OR REPLACE COMPUTER POWER SUPPLIES  
 K 477 REMOVE OR REPLACE ATTITUDE AND RATE TEST STATION TRUs  
 L 492 REMOVE OR REPLACE CENPAC NETWORK MODULE TESTERS  
 L 495 REMOVE OR REPLACE ELECTRONIC SYSTEMS TEST STATION TRUs  
 L 498 REMOVE OR REPLACE INDICATORS AND MODULES TEST STATION TRUs  
 L 501 REMOVE OR REPLACE INDICATORS AND SENSORS TEST STATION TRUs  
 M 513 REMOVE OR REPLACE COMPUTER (6803) TEST STATION TRUs  
 M 516 REMOVE OR REPLACE CONVERTER AND FLIGHT CONTROLS TEST STATION TRUs  
 M 519 REMOVE OR REPLACE NAVIGATION AND FLIGHT CONTROLS TEST STATION TRUs  
 N 553 REMOVE OR REPLACE F-111D RADAR DTS TEST STATION TRUs  
 N 556 REMOVE OR REPLACE RADAR ALTIMETER (6836) TEST STATION TRUs  
 N 559 REMOVE OR REPLACE VIDEO (6815, 6875 AND 6885) TEST STATION TRUs  
 P 589 REMOVE OR REPLACE RECEIVER-TRANSMITTER-MODULATOR TEST STATION TRUs

**USAF JOB INVENTORY TASK STATEMENTS:**

Q 599 REMOVE OR REPLACE INDICATORS AND SERVOS (6895) TEST STATION TRUs  
Q 602 REMOVE OR REPLACE SERVOS AND INDICATORS (6825) TEST STATION TRUs  
R 609 REMOVE OR REPLACE DIGITAL NAVIGATION AND WEAPONS DELIVERY (6863) TEST STATION TRUs  
T 868 REMOVE OR REPLACE DISPLAYS TEST STATION TRUs  
U1024 REMOVE OR REPLACE PROM PROGRAMMER SRUs OR COMPONENTS  
V1132 REMOVE OR REPLACE CADc (1803A1) TEST STATION TRUs  
V1136 REMOVE OR REPLACE MISSION AND TRAFFIC CONTROL (6849) TEST STATION TRUs  
V1139 REMOVE OR REPLACE MISSION AND TRAFFIC CONTROL (6879) TEST STATION TRUs  
X1294 REMOVE OR REPLACE PEN AIDS TEST STATION HIGH VOLTAGE/INTERMEDIATE VOLTAGE DIVIDERS  
Z1366 REMOVE OR REPLACE AN/ALM-204 TRUs OR SRUs

**TASK NUMBER:** 61390

**TASK STATEMENT:**

REMOVE AND REPLACE SRUs (F 267)

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CIRCUIT CARD EXTRACTOR  
CTK  
ESD PROTECTIVE EQUIPMENT  
SOLDERING STATION  
TORQUE WRENCHES

**REFERENCES:**

APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
APPLICABLE IPB

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

- A REMOVE POWER
- A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)
- A REMOVE/INSTALL CONNECTORS

**SKILLS:**

- S SOLDER OR DESOLDER TERMINAL CONNECTIONS
- S USE CIRCUIT CARD EXTRACTOR
- S USE COMMON HANDTOOLS
- S USE TORQUE WRENCH TO SECURE HARDWARE

**KNOWLEDGE:**

- K ANNOTATE FORMS
- K APPLY ESD PRECAUTIONS
- K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
- K APPLY SHOP SAFETY PROCEDURES
- K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 266         |            | 0          | 3          | 8        | 4        | 4.82       |     |
| 451X6B | F 266         |            | 4          | 4          | 7        | 4        | 4.82       |     |
| 451X6  | F 266         |            | 2          | 3          | 8        | 4        | 4.82       |     |
| 451X6A | F 267         |            | 63         | 71         | 74       | 44       | 3.78       |     |
| 451X6B | F 267         |            | 42         | 55         | 65       | 44       | 3.78       |     |
| 451X6  | F 267         |            | 55         | 63         | 70       | 44       | 3.78       |     |
| 451X6A | H 398         |            | 8          | 8          | 9        | 5        | 4.42       |     |
| 451X6B | H 398         |            | 0          | 1          | 2        | 5        | 4.42       |     |
| 451X6  | H 398         |            | 5          | 5          | 5        | 5        | 4.42       |     |
| 451X6A | H 401         |            | 8          | 6          | 5        | 3        | 4.40       |     |
| 451X6B | H 401         |            | 0          | 1          | 1        | 3        | 4.40       |     |
| 451X6  | H 401         |            | 5          | 3          | 3        | 3        | 4.40       |     |
| 451X6A | H 404         |            | 11         | 7          | 6        | 5        | 4.48       |     |
| 451X6B | H 404         |            | 0          | 1          | 2        | 5        | 4.48       |     |
| 451X6  | H 404         |            | 6          | 4          | 4        | 5        | 4.48       |     |
| 451X6A | H 408         |            | 11         | 13         | 8        | 4        | 4.41       |     |
| 451X6B | H 408         |            | 4          | 4          | 2        | 4        | 4.41       |     |
| 451X6  | H 408         |            | 8          | 8          | 5        | 4        | 4.41       |     |
| 451X6A | J 458         |            | 0          | 4          | 6        | 2        | 4.21       |     |
| 451X6B | J 458         |            | 0          | 0          | 0        | 2        | 4.21       |     |
| 451X6  | J 458         |            | 0          | 2          | 3        | 2        | 4.21       |     |
| 451X6A | J 460         |            | 0          | 6          | 9        | 3        | 4.29       |     |
| 451X6B | J 460         |            | 0          | 0          | 0        | 3        | 4.29       |     |
| 451X6  | J 460         |            | 0          | 3          | 5        | 3        | 4.29       |     |
| 451X6A | J 461         |            | 3          | 7          | 8        | 2        | 4.17       |     |
| 451X6B | J 461         |            | 0          | 0          | 0        | 2        | 4.17       |     |
| 451X6  | J 461         |            | 2          | 3          | 4        | 2        | 4.17       |     |
| 451X6A | J 464         |            | 3          | 7          | 8        | 2        | 4.87       |     |
| 451X6B | J 464         |            | 0          | 0          | 0        | 2        | 4.87       |     |
| 451X6  | J 464         |            | 2          | 3          | 4        | 2        | 4.87       |     |
| 451X6A | J 465         |            | 3          | 7          | 9        | 2        | 3.42       |     |
| 451X6B | J 465         |            | 0          | 0          | 0        | 2        | 3.42       |     |
| 451X6  | J 465         |            | 2          | 3          | 5        | 2        | 3.42       |     |
| 451X6A | J 467         |            | 3          | 6          | 9        | 2        | 5.14       |     |
| 451X6B | J 467         |            | 0          | 0          | 0        | 2        | 5.14       |     |
| 451X6  | J 467         |            | 2          | 3          | 5        | 2        | 5.14       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | J 469         |            | 0          | 4          | 9        | 2        | 4.19       |     |
| 451X6B | J 469         |            | 0          | 0          | 0        | 2        | 4.19       |     |
| 451X6  | J 469         |            | 0          | 2          | 5        | 2        | 4.19       |     |
| 451X6A | K 476         |            | 3          | 4          | 7        | 1        | 4.41       |     |
| 451X6B | K 476         |            | 0          | 0          | 0        | 1        | 4.41       |     |
| 451X6  | K 476         |            | 2          | 2          | 4        | 1        | 4.41       |     |
| 451X6A | L 494         |            | 5          | 4          | 4        | 2        | 4.08       |     |
| 451X6B | L 494         |            | 0          | 0          | 0        | 2        | 4.08       |     |
| 451X6  | L 494         |            | 3          | 2          | 2        | 2        | 4.08       |     |
| 451X6A | L 497         |            | 0          | 7          | 8        | 2        | 4.04       |     |
| 451X6B | L 497         |            | 0          | 0          | 0        | 2        | 4.04       |     |
| 451X6  | L 497         |            | 0          | 3          | 4        | 2        | 4.04       |     |
| 451X6A | L 500         |            | 3          | 3          | 5        | 3        | 4.32       |     |
| 451X6B | L 500         |            | 0          | 0          | 0        | 3        | 4.32       |     |
| 451X6  | L 500         |            | 2          | 2          | 3        | 3        | 4.32       |     |
| 451X6A | M 512         |            | 8          | 9          | 7        | 1        | 3.89       |     |
| 451X6B | M 512         |            | 0          | 0          | 1        | 1        | 3.89       |     |
| 451X6  | M 512         |            | 5          | 5          | 4        | 1        | 3.89       |     |
| 451X6A | M 515         |            | 3          | 2          | 4        | 1        | 3.94       |     |
| 451X6B | M 515         |            | 0          | 0          | 0        | 1        | 3.94       |     |
| 451X6  | M 515         |            | 2          | 1          | 2        | 1        | 3.94       |     |
| 451X6A | M 518         |            | 3          | 2          | 2        | 1        | 4.03       |     |
| 451X6B | M 518         |            | 0          | 0          | 0        | 1        | 4.03       |     |
| 451X6  | M 518         |            | 2          | 1          | 1        | 1        | 4.03       |     |
| 451X6A | N 552         |            | 0          | 1          | 0        | 0        | 4.80       |     |
| 451X6B | N 552         |            | 0          | 0          | 0        | 0        | 4.80       |     |
| 451X6  | N 552         |            | 0          | 1          | 0        | 0        | 4.80       |     |
| 451X6A | N 555         |            | 3          | 3          | 1        | 1        | 4.40       |     |
| 451X6B | N 555         |            | 0          | 0          | 0        | 1        | 4.40       |     |
| 451X6  | N 555         |            | 2          | 2          | 0        | 1        | 4.40       |     |
| 451X6A | N 558         |            | 5          | 10         | 14       | 4        | 4.37       |     |
| 451X6B | N 558         |            | 0          | 0          | 0        | 4        | 4.37       |     |
| 451X6  | N 558         |            | 3          | 5          | 8        | 4        | 4.37       |     |
| 451X6A | O 572         |            | 0          | 0          | 1        | 0        | 4.35       |     |
| 451X6B | O 572         |            | 0          | 0          | 0        | 0        | 4.35       |     |
| 451X6  | O 572         |            | 0          | 0          | 0        | 0        | 4.35       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | P 584         |            | 0          | 1          | 2        | 1        | 4.58       |     |
| 451X6B | P 584         |            | 0          | 0          | 0        | 1        | 4.58       |     |
| 451X6  | P 584         |            | 0          | 1          | 1        | 1        | 4.58       |     |
| 451X6A | P 585         |            | 0          | 1          | 2        | 1        | 4.64       |     |
| 451X6B | P 585         |            | 0          | 0          | 0        | 1        | 4.64       |     |
| 451X6  | P 585         |            | 0          | 1          | 1        | 1        | 4.64       |     |
| 451X6A | P 586         |            | 0          | 1          | 2        | 0        | 4.68       |     |
| 451X6B | P 586         |            | 0          | 0          | 0        | 0        | 4.68       |     |
| 451X6  | P 586         |            | 0          | 1          | 1        | 0        | 4.68       |     |
| 451X6A | P 588         |            | 11         | 12         | 14       | 4        | 4.16       |     |
| 451X6B | P 588         |            | 0          | 0          | 0        | 4        | 4.16       |     |
| 451X6  | P 588         |            | 6          | 6          | 8        | 4        | 4.16       |     |
| 451X6A | Q 598         |            | 0          | 0          | 1        | 0        | 4.38       |     |
| 451X6B | Q 598         |            | 0          | 0          | 0        | 0        | 4.38       |     |
| 451X6  | Q 598         |            | 0          | 0          | 1        | 0        | 4.38       |     |
| 451X6A | Q 601         |            | 3          | 3          | 7        | 1        | 4.14       |     |
| 451X6B | Q 601         |            | 0          | 0          | 0        | 1        | 4.14       |     |
| 451X6  | Q 601         |            | 2          | 2          | 4        | 1        | 4.14       |     |
| 451X6A | R 608         |            | 5          | 8          | 10       | 4        | 4.18       |     |
| 451X6B | R 608         |            | 0          | 0          | 0        | 4        | 4.18       |     |
| 451X6  | R 608         |            | 3          | 4          | 5        | 4        | 4.18       |     |
| 451X6A | T 867         |            | 3          | 1          | 2        | 1        | 4.69       |     |
| 451X6B | T 867         |            | 0          | 0          | 0        | 1        | 4.69       |     |
| 451X6  | T 867         |            | 2          | 1          | 1        | 1        | 4.69       |     |
| 451X6A | T 875         |            | 0          | 0          | 0        | 0        | 4.43       |     |
| 451X6B | T 875         |            | 0          | 0          | 0        | 0        | 4.43       |     |
| 451X6  | T 875         |            | 0          | 0          | 0        | 0        | 4.43       |     |
| 451X6A | T 876         |            | 0          | 0          | 0        | 0        | 4.09       |     |
| 451X6B | T 876         |            | 0          | 0          | 0        | 0        | 4.09       |     |
| 451X6  | T 876         |            | 0          | 0          | 0        | 0        | 4.09       |     |
| 451X6A | V1131         |            | 0          | 0          | 0        | 4        | 4.21       |     |
| 451X6B | V1131         |            | 8          | 9          | 10       | 4        | 4.21       |     |
| 451X6  | V1131         |            | 3          | 5          | 5        | 4        | 4.21       |     |
| 451X6A | V1133         |            | 0          | 0          | 0        | 2        | 4.18       |     |
| 451X6B | V1133         |            | 8          | 14         | 10       | 2        | 4.18       |     |
| 451X6  | V1133         |            | 3          | 7          | 5        | 2        | 4.18       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | V1135         |            | 0          | 0          | 0        | 0        | 4.24       |     |
| 451X6B | V1135         |            | 0          | 0          | 0        | 0        | 4.24       |     |
| 451X6  | V1135         |            | 0          | 0          | 0        | 0        | 4.24       |     |
| 451X6A | V1138         |            | 0          | 0          | 0        | 0        | 4.16       |     |
| 451X6B | V1138         |            | 0          | 0          | 0        | 0        | 4.16       |     |
| 451X6  | V1138         |            | 0          | 0          | 0        | 0        | 4.16       |     |
| 451X6A | V1142         |            | 0          | 0          | 0        | 3        | 4.41       |     |
| 451X6B | V1142         |            | 4          | 5          | 6        | 3        | 4.41       |     |
| 451X6  | V1142         |            | 2          | 2          | 3        | 3        | 4.41       |     |
| 451X6A | V1143         |            | 0          | 0          | 0        | 0        | 4.48       |     |
| 451X6B | V1143         |            | 0          | 0          | 0        | 0        | 4.48       |     |
| 451X6  | V1143         |            | 0          | 0          | 0        | 0        | 4.48       |     |
| 451X6A | V1144         |            | 0          | 0          | 0        | 3        | 4.41       |     |
| 451X6B | V1144         |            | 4          | 6          | 6        | 3        | 4.41       |     |
| 451X6  | V1144         |            | 2          | 3          | 3        | 3        | 4.41       |     |
| 451X6A | V1146         |            | 0          | 0          | 0        | 3        | 4.12       |     |
| 451X6B | V1146         |            | 8          | 6          | 7        | 3        | 4.12       |     |
| 451X6  | V1146         |            | 3          | 3          | 3        | 3        | 4.12       |     |
| 451X6A | V1147         |            | 0          | 0          | 0        | 2        | 4.61       |     |
| 451X6B | V1147         |            | 8          | 8          | 6        | 2        | 4.61       |     |
| 451X6  | V1147         |            | 3          | 4          | 3        | 2        | 4.61       |     |
| 451X6A | V1148         |            | 0          | 0          | 0        | 0        | 4.46       |     |
| 451X6B | V1148         |            | 0          | 0          | 1        | 0        | 4.46       |     |
| 451X6  | V1148         |            | 0          | 0          | 0        | 0        | 4.46       |     |
| 451X6A | V1149         |            | 0          | 0          | 0        | 3        | 4.47       |     |
| 451X6B | V1149         |            | 8          | 6          | 7        | 3        | 4.47       |     |
| 451X6  | V1149         |            | 3          | 3          | 3        | 3        | 4.47       |     |
| 451X6A | V1150         |            | 0          | 0          | 0        | 0        | 4.92       |     |
| 451X6B | V1150         |            | 4          | 1          | 1        | 0        | 4.92       |     |
| 451X6  | V1150         |            | 2          | 1          | 0        | 0        | 4.92       |     |
| 451X6A | V1151         |            | 0          | 0          | 0        | 3        | 4.60       |     |
| 451X6B | V1151         |            | 4          | 5          | 7        | 3        | 4.60       |     |
| 451X6  | V1151         |            | 2          | 2          | 4        | 3        | 4.60       |     |
| 451X6A | V1152         |            | 0          | 0          | 0        | 3        | 4.71       |     |
| 451X6B | V1152         |            | 8          | 8          | 7        | 3        | 4.71       |     |
| 451X6  | V1152         |            | 3          | 4          | 4        | 3        | 4.71       |     |

# RELATED OCCUPATIONAL SURVEY DATA:

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | X1291         |            | 0          | 0          | 0        | 9        | 4.80       |     |
| 451X6B | X1291         |            | 0          | 13         | 17       | 9        | 4.80       |     |
| 451X6  | X1291         |            | 0          | 6          | 9        | 9        | 4.80       |     |
| 451X6A | X1292         |            | 0          | 0          | 0        | 9        | 4.63       |     |
| 451X6B | X1292         |            | 8          | 16         | 17       | 9        | 4.63       |     |
| 451X6  | X1292         |            | 3          | 8          | 8        | 9        | 4.63       |     |
| 451X6A | X1293         |            | 0          | 0          | 0        | 6        | 4.53       |     |
| 451X6B | X1293         |            | 4          | 14         | 10       | 6        | 4.53       |     |
| 451X6  | X1293         |            | 2          | 7          | 5        | 6        | 4.53       |     |
| 451X6A | X1295         |            | 0          | 0          | 0        | 6        | 5.09       |     |
| 451X6B | X1295         |            | 4          | 13         | 9        | 6        | 5.09       |     |
| 451X6  | X1295         |            | 2          | 6          | 4        | 6        | 5.09       |     |

## USAF JOB INVENTORY TASK STATEMENTS:

F 266 REMOVE OR REPLACE PRINTER COMPONENTS  
 F 267 REMOVE OR REPLACE SHOP REPLACEABLE UNITS (SRU)  
 H 398 REMOVE OR REPLACE AIS/R COMPUTER TEST STATION SRUs  
 H 401 REMOVE OR REPLACE AIS/R EW TEST STATION SRUs  
 H 404 REMOVE OR REPLACE AIS/R VIDEO TEST STATION SRUs  
 H 408 REMOVE OR REPLACE RF TEST STATION SRUs  
 J 458 REMOVE OR REPLACE CENPAC PUNCH TAPE READER SRUs  
 J 460 REMOVE OR REPLACE CENPAC SRUs  
 J 461 REMOVE OR REPLACE CENPAC SRUs, OTHER THAN MTU OR PUNCH TAPE READER SRUs  
 J 464 REMOVE OR REPLACE I/O COMPUTER POWER SUPPLY COMPONENTS  
 J 465 REMOVE OR REPLACE I/O MODULES  
 J 467 REMOVE OR REPLACE MTU CAPSTAN BELTS  
 J 469 REMOVE OR REPLACE MTU SRUs  
 K 476 REMOVE OR REPLACE ATTITUDE AND RATE TEST STATION TRU SRUs  
 L 494 REMOVE OR REPLACE ELECTRONIC SYSTEMS TEST STATION SRUs  
 L 497 REMOVE OR REPLACE INDICATORS AND MODULES TEST STATION SRUs  
 L 500 REMOVE OR REPLACE INDICATORS AND SENSORS TEST STATION SRUs  
 M 512 REMOVE OR REPLACE COMPUTER (6803) TEST STATION SRUs  
 M 515 REMOVE OR REPLACE CONVERTER AND FLIGHT CONTROLS TEST STATION SRUs  
 M 518 REMOVE OR REPLACE NAVIGATION AND FLIGHT CONTROLS TEST STATION SRUs  
 N 552 REMOVE OR REPLACE F-111D RADAR DTS TEST STATION SRUs  
 N 555 REMOVE OR REPLACE RADAR ALTIMETER (6836) TEST STATION SRUs  
 N 558 REMOVE OR REPLACE VIDEO (6815, 6875 AND 6885) TEST STATION SRUs  
 O 572 REMOVE OR REPLACE DOPPLER RADAR TEST STATION SRUs  
 P 584 REMOVE OR REPLACE FLUID PRESSURIZATION (65AN) TEST STATION SRU COMPONENTS  
 P 585 REMOVE OR REPLACE FLUID PRESSURIZATION (65AN) TEST STATION SRUs

# **USAF JOB INVENTORY TASK STATEMENTS:**

P 586 REMOVE OR REPLACE FLUID PRESSURIZATION (65AN) TEST STATION TRUs

P 588 REMOVE OR REPLACE RECEIVER-TRANSMITTER-MODULATOR TEST STATION SRUs

Q 598 REMOVE OR REPLACE INDICATORS AND SERVOS (6895) TEST STATION SRUs

Q 601 REMOVE OR REPLACE SERVOS AND INDICATORS (6825) TEST STATION SRUs

R 608 REMOVE OR REPLACE DIGITAL NAVIGATION AND WEAPONS DELIVERY (6863) TEST STATION SRUs

T 867 REMOVE OR REPLACE DISPLAYS TEST STATION TRU SRUs

T 875 REMOVE OR REPLACE INDICATOR DISPLAY SYSTEM MOCKUP COMPONENTS

T 876 REMOVE OR REPLACE INDICATOR DISPLAY SYSTEM MOCKUP SRUs

V1131 REMOVE OR REPLACE CADC (1803A1) TEST STATION SRUs

V1133 REMOVE OR REPLACE CADC SRUs OR COMPONENTS

V1135 REMOVE OR REPLACE MISSION AND TRAFFIC CONTROL (6849) TEST STATION SRUs

V1138 REMOVE OR REPLACE MISSION AND TRAFFIC CONTROL (6879) TEST STATION SRUs

V1142 REMOVE OR REPLACE TEST STATION ANGLE POSITION INDICATOR SRUs OR COMPONENTS

V1143 REMOVE OR REPLACE TEST STATION ARTIFICIAL ANTENNA SRUs OR COMPONENTS

V1144 REMOVE OR REPLACE TEST STATION AUTOMATIC CONTROL PANEL COMPONENTS

V1146 REMOVE OR REPLACE TEST STATION DIGITAL COMPARATOR SRUs OR COMPONENTS

V1147 REMOVE OR REPLACE TEST STATION DUAL POWER SUPPLY COMPONENTS

V1148 REMOVE OR REPLACE TEST STATION EXCITER SRUs OR COMPONENTS

V1149 REMOVE OR REPLACE TEST STATION MANUAL CONTROL PANEL COMPONENTS

V1150 REMOVE OR REPLACE TEST STATION RF AMPLIFIER SRUs OR COMPONENTS

V1151 REMOVE OR REPLACE TEST STATION SIGNAL SIMULATE AND MEASURE PANEL SRUs OR COMPONENTS

V1152 REMOVE OR REPLACE TEST STATION TAPE BLOCK READER COMPONENTS

X1291 REMOVE OR REPLACE CRS TEST STATION SRUs, TRUs, OR COMPONENTS

X1292 REMOVE OR REPLACE DPTS SRUs, TRUs, OR COMPONENTS

X1293 REMOVE OR REPLACE PEN AIDS TEST STATION BUFFER/ADAPTER COMPONENTS

X1295 REMOVE OR REPLACE PEN AIDS TEST STATION TRUs, SRUs, OR COMPONENTS

**TASK NUMBER:** 61400

**TASK STATEMENT:**

REMOVE AND REPLACE COMPONENTS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK

ESD PROTECTIVE EQUIPMENT

EXTRACTION TOOLS

INSERTION TOOLS

SOLDERING STATION

**REFERENCES:**

APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

APPLICABLE IPB

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**SKILLS:**

S SOLDER OR DESOLDER COAXIAL CONNECTORS

S SOLDER OR DESOLDER MULTIPIN CONNECTORS

S SOLDER OR DESOLDER PC BOARDS

S SOLDER OR DESOLDER TERMINAL CONNECTIONS

S USE COMMON HANDTOOLS

S USE EXTRACTION TOOLS

S USE INSERTION TOOLS

**KNOWLEDGE:**

K APPLY ESD PRECAUTIONS

K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS

K APPLY SHOP SAFETY PROCEDURES

K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 256         |            | 13         | 9          | 9        | 9        | 4.22       |     |
| 451X6B | F 256         |            | 8          | 8          | 9        | 9        | 4.22       |     |
| 451X6  | F 256         |            | 11         | 8          | 9        | 9        | 4.22       |     |
| 451X6A | F 269         |            | 42         | 44         | 43       | 32       | 3.25       |     |
| 451X6B | F 269         |            | 50         | 60         | 59       | 32       | 3.25       |     |
| 451X6  | F 269         |            | 45         | 51         | 50       | 32       | 3.25       |     |
| 451X6A | F 270         |            | 45         | 53         | 58       | 38       | 4.43       |     |
| 451X6B | F 270         |            | 38         | 44         | 54       | 38       | 4.43       |     |
| 451X6  | F 270         |            | 42         | 48         | 56       | 38       | 4.43       |     |
| 451X6A | F 271         |            | 50         | 58         | 62       | 39       | 4.20       |     |
| 451X6B | F 271         |            | 35         | 47         | 47       | 39       | 4.20       |     |
| 451X6  | F 271         |            | 43         | 52         | 55       | 39       | 4.20       |     |
| 451X6A | F 280         |            | 42         | 58         | 65       | 43       | 5.43       |     |
| 451X6B | F 280         |            | 73         | 71         | 70       | 43       | 5.43       |     |
| 451X6  | F 280         |            | 54         | 63         | 68       | 43       | 5.43       |     |
| 451X6A | F 281         |            | 92         | 87         | 77       | 47       | 4.92       |     |
| 451X6B | F 281         |            | 77         | 80         | 79       | 47       | 4.92       |     |
| 451X6  | F 281         |            | 85         | 82         | 78       | 47       | 4.92       |     |
| 451X6A | H 397         |            | 5          | 6          | 8        | 5        | 4.68       |     |
| 451X6B | H 397         |            | 0          | 0          | 1        | 5        | 4.68       |     |
| 451X6  | H 397         |            | 3          | 3          | 5        | 5        | 4.68       |     |
| 451X6A | H 400         |            | 8          | 6          | 5        | 3        | 4.64       |     |
| 451X6B | H 400         |            | 0          | 1          | 1        | 3        | 4.64       |     |
| 451X6  | H 400         |            | 5          | 3          | 3        | 3        | 4.64       |     |
| 451X6A | H 403         |            | 5          | 3          | 5        | 4        | 4.80       |     |
| 451X6B | H 403         |            | 0          | 0          | 1        | 4        | 4.80       |     |
| 451X6  | H 403         |            | 3          | 2          | 3        | 4        | 4.80       |     |
| 451X6A | H 407         |            | 11         | 10         | 6        | 4        | 4.75       |     |
| 451X6B | H 407         |            | 4          | 2          | 1        | 4        | 4.75       |     |
| 451X6  | H 407         |            | 8          | 6          | 4        | 4        | 4.75       |     |
| 451X6A | J 457         |            | 0          | 4          | 6        | 2        | 4.81       |     |
| 451X6B | J 457         |            | 0          | 0          | 0        | 2        | 4.81       |     |
| 451X6  | J 457         |            | 0          | 2          | 3        | 2        | 4.81       |     |
| 451X6A | J 466         |            | 0          | 3          | 7        | 2        | 4.86       |     |
| 451X6B | J 466         |            | 0          | 0          | 0        | 2        | 4.86       |     |
| 451X6  | J 466         |            | 0          | 2          | 4        | 2        | 4.86       |     |

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | J 468         |            | 3          | 6          | 8        | 2        | 4.68       |     |
| 451X6B | J 468         |            | 0          | 0          | 0        | 2        | 4.68       |     |
| 451X6  | J 468         |            | 2          | 3          | 4        | 2        | 4.68       |     |
| 451X6A | K 475         |            | 3          | 4          | 7        | 1        | 5.06       |     |
| 451X6B | K 475         |            | 0          | 0          | 0        | 1        | 5.06       |     |
| 451X6  | K 475         |            | 2          | 2          | 4        | 1        | 5.06       |     |
| 451X6A | L 493         |            | 5          | 7          | 4        | 1        | 4.51       |     |
| 451X6B | L 493         |            | 0          | 0          | 0        | 1        | 4.51       |     |
| 451X6  | L 493         |            | 3          | 3          | 2        | 1        | 4.51       |     |
| 451X6A | L 496         |            | 0          | 8          | 7        | 2        | 4.35       |     |
| 451X6B | L 496         |            | 0          | 0          | 0        | 2        | 4.35       |     |
| 451X6  | L 496         |            | 0          | 4          | 4        | 2        | 4.35       |     |
| 451X6A | L 499         |            | 3          | 3          | 5        | 3        | 4.71       |     |
| 451X6B | L 499         |            | 0          | 0          | 0        | 3        | 4.71       |     |
| 451X6  | L 499         |            | 2          | 2          | 3        | 3        | 4.71       |     |
| 451X6A | M 511         |            | 11         | 10         | 7        | 1        | 4.28       |     |
| 451X6B | M 511         |            | 0          | 0          | 1        | 1        | 4.28       |     |
| 451X6  | M 511         |            | 6          | 5          | 4        | 1        | 4.28       |     |
| 451X6A | M 514         |            | 3          | 2          | 4        | 1        | 4.26       |     |
| 451X6B | M 514         |            | 0          | 0          | 0        | 1        | 4.26       |     |
| 451X6  | M 514         |            | 2          | 1          | 2        | 1        | 4.26       |     |
| 451X6A | M 517         |            | 3          | 2          | 2        | 1        | 4.41       |     |
| 451X6B | M 517         |            | 0          | 0          | 0        | 1        | 4.41       |     |
| 451X6  | M 517         |            | 2          | 1          | 1        | 1        | 4.41       |     |
| 451X6A | N 550         |            | 0          | 1          | 0        | 0        | 4.58       |     |
| 451X6B | N 550         |            | 0          | 0          | 0        | 0        | 4.58       |     |
| 451X6  | N 550         |            | 0          | 1          | 0        | 0        | 4.58       |     |
| 451X6A | N 554         |            | 3          | 2          | 1        | 1        | 4.54       |     |
| 451X6B | N 554         |            | 0          | 0          | 0        | 1        | 4.54       |     |
| 451X6  | N 554         |            | 2          | 1          | 1        | 1        | 4.54       |     |
| 451X6A | N 557         |            | 11         | 12         | 15       | 4        | 4.90       |     |
| 451X6B | N 557         |            | 0          | 0          | 0        | 4        | 4.90       |     |
| 451X6  | N 557         |            | 6          | 6          | 8        | 4        | 4.90       |     |
| 451X6A | O 571         |            | 0          | 0          | 1        | 0        | 4.44       |     |
| 451X6B | O 571         |            | 0          | 0          | 0        | 0        | 4.44       |     |
| 451X6  | O 571         |            | 0          | 0          | 0        | 0        | 4.44       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | P 587         |            | 11         | 11         | 14       | 3        | 4.68       |     |
| 451X6B | P 587         |            | 0          | 0          | 0        | 3        | 4.68       |     |
| 451X6  | P 587         |            | 6          | 6          | 8        | 3        | 4.68       |     |
| 451X6A | Q 597         |            | 0          | 2          | 2        | 1        | 4.97       |     |
| 451X6B | Q 597         |            | 0          | 0          | 0        | 1        | 4.97       |     |
| 451X6  | Q 597         |            | 0          | 1          | 1        | 1        | 4.97       |     |
| 451X6A | Q 600         |            | 3          | 3          | 7        | 1        | 4.75       |     |
| 451X6B | Q 600         |            | 0          | 0          | 0        | 1        | 4.75       |     |
| 451X6  | Q 600         |            | 2          | 2          | 4        | 1        | 4.75       |     |
| 451X6A | R 607         |            | 5          | 8          | 10       | 4        | 4.64       |     |
| 451X6B | R 607         |            | 0          | 0          | 0        | 4        | 4.64       |     |
| 451X6  | R 607         |            | 3          | 4          | 5        | 4        | 4.64       |     |
| 451X6A | T 866         |            | 3          | 1          | 1        | 1        | 4.83       |     |
| 451X6B | T 866         |            | 0          | 0          | 0        | 1        | 4.83       |     |
| 451X6  | T 866         |            | 2          | 1          | 1        | 1        | 4.83       |     |
| 451X6A | V1130         |            | 0          | 0          | 0        | 3        | 4.37       |     |
| 451X6B | V1130         |            | 8          | 9          | 9        | 3        | 4.37       |     |
| 451X6  | V1130         |            | 3          | 5          | 5        | 3        | 4.37       |     |
| 451X6A | Y1341         |            | 0          | 0          | 0        | 1        | 5.53       |     |
| 451X6B | Y1341         |            | 4          | 1          | 4        | 1        | 5.53       |     |
| 451X6  | Y1341         |            | 2          | 1          | 2        | 1        | 5.53       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 256 REMOVE OR REPLACE COMPUTER TERMINALS OR COMPONENTS  
 F 269 REMOVE OR REPLACE SOLDERLESS CIRCUIT CARD COMPONENTS  
 F 270 REMOVE OR REPLACE SRU COMPONENTS  
 F 271 REMOVE OR REPLACE TEST STATION ADAPTER COMPONENTS  
 F 280 SOLDER COMPONENTS, SUCH AS INTEGRATED CIRCUITS OR SEMICONDUCTORS  
 F 281 SOLDER COMPONENTS, SUCH AS RELAYS, RESISTERS, OR PLUGS  
 H 397 REMOVE OR REPLACE AIS/R COMPUTER TEST STATION SRU COMPONENTS  
 H 400 REMOVE OR REPLACE AIS/R EW TEST STATION SRU COMPONENTS  
 H 403 REMOVE OR REPLACE AIS/R VIDEO TEST STATION SRU COMPONENTS  
 H 407 REMOVE OR REPLACE RF TEST STATION SRU COMPONENTS  
 J 457 REMOVE OR REPLACE CENPAC PUNCH TAPE READER SRU COMPONENTS  
 J 466 REMOVE OR REPLACE I/O SRU COMPONENTS  
 J 468 REMOVE OR REPLACE MTU SRU COMPONENTS  
 K 475 REMOVE OR REPLACE ATTITUDE AND RATE TEST STATION SRU COMPONENTS  
 L 493 REMOVE OR REPLACE ELECTRONIC SYSTEMS TEST STATION SRU COMPONENTS

**USAF JOB INVENTORY TASK STATEMENTS:**

L 496 REMOVE OR REPLACE INDICATORS AND MODULES TEST STATION SRU  
COMPONENTS  
L 499 REMOVE OR REPLACE INDICATORS AND SENSORS TEST STATION SRU  
COMPONENTS  
M 511 REMOVE OR REPLACE COMPUTER (6803) TEST STATION SRU  
COMPONENTS  
M 514 REMOVE OR REPLACE CONVERTER AND FLIGHT CONTROLS TEST  
STATION SRU COMPONENTS  
M 517 REMOVE OR REPLACE NAVIGATION AND FLIGHT CONTROLS TEST  
STATION SRU COMPONENTS  
N 550 REMOVE OR REPLACE F-111D RADAR DTS TEST STATION COMPONENTS  
N 554 REMOVE OR REPLACE RADAR ALTIMETER (6836) TEST STATION SRU  
COMPONENTS  
N 557 REMOVE OR REPLACE VIDEO (6815, 6875 AND 6885) TEST STATION  
SRU COMPONENTS  
O 571 REMOVE OR REPLACE DOPPLER RADAR TEST STATION SRU COMPONENTS  
P 587 REMOVE OR REPLACE RECEIVER-TRANSMITTER-MODULATOR TEST  
STATION SRU COMPONENTS  
Q 597 REMOVE OR REPLACE INDICATORS AND SERVOS (6895) TEST STATION  
SRU COMPONENTS  
Q 600 REMOVE OR REPLACE SERVOS AND INDICATORS (6825) TEST STATION  
SRU COMPONENTS  
R 607 REMOVE OR REPLACE DIGITAL NAVIGATION AND WEAPONS DELIVERY  
(6863) TEST STATION SRU COMPONENTS  
T 866 REMOVE OR REPLACE DISPLAYS TEST STATION SRU COMPONENTS  
V1130 REMOVE OR REPLACE CAD/C (1803A1) TEST STATION SRU COMPONENTS  
Y1341 REMOVE OR REPLACE QRC 80-01 CONTROL BOX COMPONENTS

**TASK NUMBER:** 61410

**TASK STATEMENT:**

REMOVE AND REPLACE MINOR HARDWARE

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK

ESD PROTECTIVE EQUIPMENT

TORQUE WRENCH

**REFERENCES:**

APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

APPLICABLE IPB

**CUES:**

ISOLATED MALFUNCTION; AFTER REPAIR

**STANDARDS:**

IAW REFERENCES

**SKILLS:**

S USE COMMON HANDTOOLS

S USE TORQUE WRENCH

**KNOWLEDGE:**

K APPLY ESD PRECAUTIONS

K APPLY SHOP SAFETY PROCEDURES

K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 263         |            | 92         | 86         | 80       | 47       | 2.66       |     |
| 451X6B | F 263         |            | 73         | 82         | 78       | 47       | 2.66       |     |
| 451X6  | F 263         |            | 85         | 84         | 79       | 47       | 2.66       |     |
| 451X6A | F 274         |            | 92         | 87         | 80       | 48       | 1.82       |     |
| 451X6B | F 274         |            | 85         | 86         | 78       | 48       | 1.82       |     |
| 451X6  | F 274         |            | 89         | 86         | 79       | 48       | 1.82       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 263 REMOVE OR REPLACE LRU MINOR HARDWARE

F 274 REMOVE OR REPLACE TEST STATION MINOR HARDWARE SUCH AS,  
LIGHT BULBS OR FUSES

**TASK NUMBER:** 61420

**TASK STATEMENT:** .

ISOLATE MALFUNCTIONS IN ELECTRICAL EQUIPMENT RACKS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
ESD PROTECTIVE EQUIPMENT  
MULTIMETER  
OSCILLOSCOPE  
SIGNAL GENERATOR  
REFLECTOMETER

**REFERENCES:**

APPLICABLE SHOP SYSTEMS TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**SKILLS:**

S PERFORM VISUAL INSPECTION  
S USE COMMON HANDTOOLS  
S USE MULTIMETER TO CHECK CONTINUITY  
S USE OSCILLOSCOPE  
S USE REFLECTOMETER TO LOCATE WIRING PROBLEM  
S USE SIGNAL GENERATOR TO CHECK SIGNAL

**KNOWLEDGE:**

K APPLY AC CIRCUIT THEORY OF OPERATION  
K APPLY COMBINATIONAL LOGIC CIRCUIT THEORY OF OPERATION  
K APPLY DC CIRCUIT THEORY OF OPERATION  
K APPLY ESD PRECAUTIONS  
K APPLY INTEGRATED CIRCUIT THEORY OF OPERATION  
K APPLY JFET THEORY OF OPERATION  
K APPLY LCD THEORY OF OPERATION  
K APPLY LED THEORY OF OPERATION  
K APPLY LOGIC CIRCUIT COUNTER THEORY OF OPERATION  
K APPLY LOGIC CIRCUIT REGISTER THEORY OF OPERATION

**KNOWLEDGE:**

K APPLY MICROWAVE OSCILLATOR OR AMPLIFIER THEORY OF OPERATION  
 K APPLY MOSFET THEORY OF OPERATION  
 K APPLY OPERATIONAL AMPLIFIER THEORY OF OPERATION  
 K APPLY RELAY THEORY OF OPERATION  
 K APPLY RESISTOR THEORY OF OPERATION  
 K APPLY SCR THEORY OF OPERATION  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY TECHNICAL DATA  
 K APPLY TUNNEL DIODE THEORY OF OPERATION  
 K APPLY UJT THEORY OF OPERATION  
 K APPLY ZENER DIODE THEORY OF OPERATION  
 K DETERMINE MEASUREMENT DEVICE REQUIRED FOR TROUBLESHOOTING  
 K ISOLATE FAULTY COMBINATIONAL LOGIC CIRCUITS  
 K ISOLATE FAULTY INTEGRATED CIRCUITS  
 K ISOLATE FAULTY JFETs  
 K ISOLATE FAULTY LCDs  
 K ISOLATE FAULTY LEDs  
 K ISOLATE FAULTY LOGIC COUNTERS  
 K ISOLATE FAULTY MICROWAVE OSCILLATORS OR AMPLIFIERS  
 K ISOLATE FAULTY MOSFETs  
 K ISOLATE FAULTY OPERATIONAL AMPLIFIERS  
 K ISOLATE FAULTY RCL CIRCUITS  
 K ISOLATE FAULTY REGISTER LOGIC CIRCUITS  
 K ISOLATE FAULTY RELAYS  
 K ISOLATE FAULTY RESISTORS  
 K ISOLATE FAULTY SCRs  
 K ISOLATE FAULTY TUNNEL DIODES  
 K ISOLATE FAULTY UJTs  
 K ISOLATE FAULTY ZENER DIODES  
 K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION  
 PROCEDURES (F 278)  
 K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
 K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |
| 451X6A | S 658         |            | 18         | 14         | 14       | 5        | 5.53       |     |
| 451X6B | S 658         |            | 0          | 0          | 1        | 5        | 5.53       |     |
| 451X6  | S 658         |            | 11         | 7          | 8        | 5        | 5.53       |     |
| 451X6A | S 660         |            | 3          | 9          | 12       | 2        | 4.49       |     |
| 451X6B | S 660         |            | 0          | 0          | 1        | 2        | 4.49       |     |
| 451X6  | S 660         |            | 2          | 5          | 7        | 2        | 4.49       |     |

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | S 670         |            | 3          | 2          | 0        | 1        | 4.66       |     |
| 451X6B | S 670         |            | 0          | 0          | 0        | 1        | 4.66       |     |
| 451X6  | S 670         |            | 2          | 1          | 0        | 1        | 4.66       |     |
| 451X6A | S 676         |            | 5          | 4          | 4        | 2        | 5.28       |     |
| 451X6B | S 676         |            | 0          | 0          | 0        | 2        | 5.28       |     |
| 451X6  | S 676         |            | 3          | 2          | 2        | 2        | 5.28       |     |
| 451X6A | S 687         |            | 5          | 7          | 4        | 0        | 4.29       |     |
| 451X6B | S 687         |            | 0          | 0          | 0        | 0        | 4.29       |     |
| 451X6  | S 687         |            | 3          | 3          | 2        | 0        | 4.29       |     |
| 451X6A | S 706         |            | 11         | 13         | 14       | 2        | 4.48       |     |
| 451X6B | S 706         |            | 0          | 0          | 2        | 2        | 4.48       |     |
| 451X6  | S 706         |            | 6          | 7          | 8        | 2        | 4.48       |     |
| 451X6A | S 720         |            | 16         | 14         | 16       | 5        | 4.66       |     |
| 451X6B | S 720         |            | 0          | 0          | 2        | 5        | 4.66       |     |
| 451X6  | S 720         |            | 9          | 7          | 9        | 5        | 4.66       |     |
| 451X6A | S 739         |            | 5          | 4          | 3        | 2        | 4.46       |     |
| 451X6B | S 739         |            | 0          | 0          | 0        | 2        | 4.46       |     |
| 451X6  | S 739         |            | 3          | 2          | 2        | 2        | 4.46       |     |
| 451X6A | X1219         |            | 0          | 0          | 0        | 6        | 4.79       |     |
| 451X6B | X1219         |            | 4          | 12         | 9        | 6        | 4.79       |     |
| 451X6  | X1219         |            | 2          | 6          | 5        | 6        | 4.79       |     |
| 451X6A | X1255         |            | 0          | 0          | 0        | 5        | 4.57       |     |
| 451X6B | X1255         |            | 4          | 9          | 8        | 5        | 4.57       |     |
| 451X6  | X1255         |            | 2          | 5          | 4        | 5        | 4.57       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES  
S 658 ISOLATE MALFUNCTIONS IN ARS ANTENNA PEDESTALS OTHER THAN F-111D  
S 660 ISOLATE MALFUNCTIONS IN ARS RACKS  
S 670 ISOLATE MALFUNCTIONS IN DIGITAL COMPUTER COMPLEX (DCC) RACKS  
S 676 ISOLATE MALFUNCTIONS IN F-111D ARS ROLL PEDESTALS  
S 687 ISOLATE MALFUNCTIONS IN LARA RACKS  
S 706 ISOLATE MALFUNCTIONS IN TFR RACKS  
S 720 PERFORM OPERATIONAL TESTS OF ARS ANTENNA PEDESTALS OTHER THAN F-111D  
S 739 PERFORM OPERATIONAL TESTS OF F-111D ARS ROLL PEDESTALS  
X1219 ISOLATE MALFUNCTIONS IN AN/ALQ-94 RACK ASSEMBLIES  
X1255 PERFORM OPERATIONAL TESTS OF AN/ALQ-94 RACK ASSEMBLIES

**TASK NUMBER:** 61430

**TASK STATEMENT:**

REPAIR ELECTRICAL EQUIPMENT RACKS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
ESD PROTECTIVE EQUIPMENT

**REFERENCES:**

APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
APPLICABLE IPB

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ORDER PARTS  
A REPAIR WIRING (TASK NUMBER: 61440)  
A REMOVE AND REPLACE COMPONENTS (TASK NUMBER: 61400)  
A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)

**SKILLS:**

S PERFORM VISUAL INSPECTION  
S USE COMMON HANDTOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY ESD PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

# **RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | S 613         |            | 21         | 16         | 18       | 5        | 5.18       |     |
| 451X6B | S 613         |            | 0          | 0          | 2        | 5        | 5.18       |     |
| 451X6  | S 613         |            | 12         | 8          | 10       | 5        | 5.18       |     |
| 451X6A | S 624         |            | 5          | 2          | 2        | 2        | 5.06       |     |
| 451X6B | S 624         |            | 0          | 0          | 0        | 2        | 5.06       |     |
| 451X6  | S 624         |            | 3          | 1          | 1        | 2        | 5.06       |     |
| 451X6A | S 782         |            | 16         | 14         | 14       | 5        | 4.92       |     |
| 451X6B | S 782         |            | 0          | 0          | 2        | 5        | 4.92       |     |
| 451X6  | S 782         |            | 9          | 7          | 8        | 5        | 4.92       |     |
| 451X6A | S 804         |            | 3          | 2          | 2        | 2        | 4.91       |     |
| 451X6B | S 804         |            | 0          | 0          | 0        | 2        | 4.91       |     |
| 451X6  | S 804         |            | 2          | 1          | 1        | 2        | 4.91       |     |
| 451X6A | S 844         |            | 8          | 11         | 12       | 2        | 4.36       |     |
| 451X6B | S 844         |            | 0          | 0          | 2        | 2        | 4.36       |     |
| 451X6  | S 844         |            | 5          | 6          | 7        | 2        | 4.36       |     |
| 451X6A | X1277         |            | 0          | 0          | 0        | 7        | 4.13       |     |
| 451X6B | X1277         |            | 0          | 9          | 8        | 7        | 4.13       |     |
| 451X6  | X1277         |            | 0          | 5          | 4        | 7        | 4.13       |     |

## **USAF JOB INVENTORY TASK STATEMENTS:**

S 613 ALIGN ARS ANTENNA PEDESTALS  
 S 624 ALIGN F-111D ARS ROLL PEDESTALS  
 S 782 REMOVE OR REPLACE ARS ANTENNA PEDESTAL COMPONENTS OTHER  
 THAN F-111D  
 S 804 REMOVE OR REPLACE F-111D ARS ROLL PEDESTAL SRUs  
 S 844 REMOVE OR REPLACE TFR RACK COMPONENTS  
 X1277 REMOVE OR REPLACE AN/ALQ-94 RACK ASSEMBLY COMPONENTS

**TASK NUMBER:** 61440

**TASK STATEMENT:**

REPAIR WIRING

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS  
RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CABLE REPAIR KIT  
CTK  
SOLDERING STATION  
SPECIAL INSERTION/EXTRACTION TOOLS  
HEAT GUN  
HEAT SHRINK  
REFLECTOMETER

**REFERENCES:**

1-1A-14  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

- A REMOVE OR REPLACE COAXIAL CABLE, WIRING, OR PINS (F 254)
- A REMOVE OR REPLACE LRU PINS OR CONNECTORS (F 264)
- A REMOVE OR REPLACE TEST STATION CABLE ASSEMBLY PINS OR CONNECTORS (F 272)
- A REMOVE OR REPLACE TRIAXIAL CABLE, WIRING, OR PINS (F 276)

**SKILLS:**

- S ASSEMBLE SOLDERLESS COAXIAL CONNECTORS
- S ASSEMBLE SOLDERLESS CRIMP CONNECTORS
- S ASSEMBLE SOLDERLESS MULTIPIN CONNECTORS
- S PERFORM VISUAL INSPECTION
- S SOLDER OR DESOLDER COAXIAL CONNECTORS
- S SOLDER OR DESOLDER MULTIPIN CONNECTORS
- S SOLDER OR DESOLDER TERMINAL CONNECTIONS
- S USE CABLE REPAIR KIT
- S USE COMMON HANDTOOLS
- S USE HEAT GUN AND HEAT SHRINK TO INSULATE WIRES

**SKILLS:**

S USE REFLECTOMETER TO LOCATE WIRING PROBLEM  
S USE SPECIAL INSERTION/EXTRACTION TOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 217         |            | 74         | 72         | 65       | 38       | 5.16       |     |
| 451X6B | F 217         |            | 77         | 66         | 66       | 38       | 5.16       |     |
| 451X6  | F 217         |            | 74         | 68         | 65       | 38       | 5.16       |     |
| 451X6A | F 254         |            | 68         | 67         | 66       | 43       | 5.13       |     |
| 451X6B | F 254         |            | 69         | 74         | 77       | 43       | 5.13       |     |
| 451X6  | F 254         |            | 69         | 70         | 71       | 43       | 5.13       |     |
| 451X6A | F 264         |            | 87         | 82         | 75       | 42       | 4.76       |     |
| 451X6B | F 264         |            | 65         | 75         | 76       | 42       | 4.76       |     |
| 451X6  | F 264         |            | 78         | 79         | 75       | 42       | 4.76       |     |
| 451X6A | F 272         |            | 76         | 78         | 70       | 42       | 5.27       |     |
| 451X6B | F 272         |            | 50         | 55         | 63       | 42       | 5.27       |     |
| 451X6  | F 272         |            | 66         | 67         | 67       | 42       | 5.27       |     |
| 451X6A | F 276         |            | 8          | 10         | 12       | 9        | 5.30       |     |
| 451X6B | F 276         |            | 4          | 8          | 12       | 9        | 5.30       |     |
| 451X6  | F 276         |            | 6          | 9          | 12       | 9        | 5.30       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 217 FABRICATE OR REBUILD CABLES  
F 254 REMOVE OR REPLACE COAXIAL CABLE WIRING OR PINS  
F 264 REMOVE OR REPLACE LRU PINS OR CONNECTORS  
F 272 REMOVE OR REPLACE TEST STATION CABLE ASSEMBLY PINS OR  
CONNECTORS  
F 276 REMOVE OR REPLACE TRIAXIAL CABLE WIRING OR PINS

**TASK NUMBER:** 61450

**TASK STATEMENT:** .

PERFORM SAFETY WIRING

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
SAFETY WIRE PLIERS  
TORQUE WRENCHES

**REFERENCES:**

APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
1-1A-15

**CUES:**

PERIODIC INSPECTION; DURING REPAIR

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A MEASURE SAFETY WIRE  
A THREAD WIRE  
A TWIST WIRE  
A SECURE WIRE

**SKILLS:**

S USE COMMON HANDTOOLS  
S USE SAFETY WIRE PLIERS  
S USE TORQUE WRENCH TO TORQUE BOLTS

**KNOWLEDGE:**

K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | V1154         |            | 0          | 0          | 0        | 3        | 3.19       |     |
| 451X6B | V1154         |            | 8          | 12         | 10       | 3        | 3.19       |     |
| 451X6  | V1154         |            | 3          | 6          | 5        | 3        | 3.19       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

V1154 SAFETY WIRE CADC SRUs

**TASK NUMBER:** 61460

**TASK STATEMENT:**

PRESSURIZE LRUs (F 252)

**TASK NOTES:**

THERE ARE TWO WAYS TO PRESSURIZE LRUs: A NITROGEN BOTTLE OR SELF-CONTAINED PRESSURIZATION TEST SET:

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
NITROGEN BOTTLE  
PRESSURE REGULATOR  
PRESSURIZATION TEST SET

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

**CUES:**

DURING OPERATIONAL TEST

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A RELEASE PRESSURE INTO REGULATOR  
A PRESSURIZE LRU TO AMOUNT SPECIFIED  
A BLEED OFF PRESSURE

**SKILLS:**

S CONNECT ADAPTERS  
S CONNECT HOSES  
S USE COMMON HANDTOOLS  
S USE NITROGEN BOTTLE TO SUPPLY GASES  
S USE PRESSURE REGULATOR TO CONTROL PRESSURE  
S USE PRESSURIZATION TEST SET

**KNOWLEDGE:**

K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K INTERPRET GAUGES TO DETERMINE PRESSURE LOSS

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 252         |            | 16         | 27         | 36       | 19       | 3.30       |     |
| 451X6B | F 252         |            | 23         | 26         | 27       | 19       | 3.30       |     |
| 451X6  | F 252         |            | 18         | 26         | 32       | 19       | 3.30       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 252 PRESSURIZE LRUs

**TASK NUMBER:** 61470

**TASK STATEMENT:**

MAINTAIN COMPRESSED GAS BOTTLES

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

APRON  
CARTS  
COMPRESSED GAS BOTTLES  
FACE SHIELD  
PROTECTIVE CAP

**REFERENCES:**

00-20-234  
APPLICABLE AFOSH STANDARD  
APPLICABLE LOCAL CHECKLIST

**CONDITIONS:**

NEED HOLDING AREA FOR EMPTY/FULL BOTTLES

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A DON SAFETY EQUIPMENT  
A REMOVE AND REPLACE COMPRESSED GAS BOTTLES (F 255)  
A REMOVE AND REPLACE REGULATOR

**SKILLS:**

S PERFORM VISUAL INSPECTION  
S SECURE BOTTLES TO TEST STATION  
S USE CART TO TRANSPORT BOTTLES  
S USE COMMON HANDTOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY SHOP SAFETY PROCEDURES

**KNOWLEDGE:**

K APPLY TECHNICAL DATA

K DETERMINE WHERE TO INTERFACE NITROGEN WITH TEST STATION

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 255         |            | 11         | 17         | 23       | 12       | 3.32       |     |
| 451X6B | F 255         |            | 8          | 9          | 12       | 12       | 3.32       |     |
| 451X6  | F 255         |            | 9          | 13         | 18       | 12       | 3.32       |     |
| 451X6A | V1145         |            | 0          | 0          | 0        | 1        | 3.51       |     |
| 451X6B | V1145         |            | 8          | 5          | 5        | 1        | 3.51       |     |
| 451X6  | V1145         |            | 3          | 2          | 3        | 1        | 3.51       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 255 REMOVE OR REPLACE COMPRESSED GAS BOTTLES

V1145 REMOVE OR REPLACE TEST STATION COMPRESSED GAS BOTTLES

**TASK NUMBER:** 61480

**TASK STATEMENT:**

MAINTAIN PRESSURE TEST SETS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

COMPRESSED AIR  
CTK  
HEAT BLANKETS  
NITROGEN  
REGULATORS

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO  
APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
APPLICABLE IPB

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN PRESSURIZATION TEST SETS  
A BAKE BOTTLES  
A CALIBRATE PRESSURIZATION TEST SETS (F 208)  
A CHECK METERS  
A INPUT NITROGEN  
A PERFORM PRESSURE CHECK  
A REMOVE AND REPLACE PRESSURIZATION TEST SET COMPONENTS (F 265)

**SKILLS:**

S PERFORM VISUAL INSPECTION  
S USE COMMON HANDTOOLS  
S USE COMPRESSED AIR TO PURGE LINES  
S USE HEAT BLANKETS TO BAKE BOTTLE (REMOVES IMPURITIES FROM SYSTEM)  
S USE NITROGEN TO PURGE LINES (CLEAN APPLICATION)  
S USE REGULATORS TO CONTROL PRESSURE

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 208         |            | 0          | 0          | 4        | 3        | 4.78       |     |
| 451X6B | F 208         |            | 4          | 5          | 5        | 3        | 4.78       |     |
| 451X6  | F 208         |            | 2          | 2          | 4        | 3        | 4.78       |     |
| 451X6A | F 265         |            | 11         | 13         | 9        | 4        | 4.23       |     |
| 451X6B | F 265         |            | 4          | 6          | 6        | 4        | 4.23       |     |
| 451X6  | F 265         |            | 8          | 10         | 8        | 4        | 4.23       |     |
| 451X6A | R 604         |            | 0          | 0          | 6        | 3        | 5.80       |     |
| 451X6B | R 604         |            | 0          | 0          | 0        | 3        | 5.80       |     |
| 451X6  | R 604         |            | 0          | 0          | 3        | 3        | 5.80       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 208 CALIBRATE PRESSURIZATION TEST SETS  
F 265 REMOVE OR REPLACE PRESSURIZATION TEST SET COMPONENTS  
R 604 ALIGN AND MAINTAIN PRESSURE TEST SETS

**TASK NUMBER:** 61430

**TASK STATEMENT:**

ISOLATE MALFUNCTIONS IN TEST STATION ADAPTERS (F 235)

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS  
RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CTK  
MULTIMETER  
TEST STATION

**REFERENCES:**

APPLICABLE INTERMEDIATE MAINTENANCE MANUAL  
APPLICABLE SHOP SYSTEMS TO  
APPLICABLE TEST PROCEDURES TO  
35-1-181-1  
35-1-181-2  
35-1-181-3

**CUES:**

DETECTED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**SKILLS:**

S INSTALL ADAPTERS  
S OPERATE TEST STATION  
S PERFORM VISUAL INSPECTION  
S USE COMMON HANDTOOLS  
S USE MULTIMETER TO CHECK CONTINUITY AND MEASURE VOLTAGE

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY RELAY THEORY OF OPERATION  
K APPLY RESISTOR THEORY OF OPERATION  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY SOLID STATE DIODE THEORY OF OPERATION  
K APPLY TECHNICAL DATA  
K ISOLATE FAULTY RELAYS  
K ISOLATE FAULTY RESISTORS  
K ISOLATE FAULTY SOLID STATE DIODES

**KNOWLEDGE:**

- K RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES (F 278)
- K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)
- K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 235         |            | 61         | 71         | 67       | 38       | 5.74       |     |
| 451X6B | F 235         |            | 35         | 45         | 47       | 38       | 5.74       |     |
| 451X6  | F 235         |            | 51         | 58         | 57       | 38       | 5.74       |     |
| 451X6A | F 278         |            | 32         | 43         | 51       | 35       | 5.04       |     |
| 451X6B | F 278         |            | 54         | 59         | 52       | 35       | 5.04       |     |
| 451X6  | F 278         |            | 42         | 51         | 52       | 35       | 5.04       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

- F 235 ISOLATE MALFUNCTIONS IN TEST STATION ADAPTERS
- F 278 RESEARCH MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES

**TASK NUMBER:** 61500

**TASK STATEMENT:**

REPAIR TEST STATION ADAPTERS

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 3-LVL CRS

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

CLEANING SOLVENTS AND BRUSHES

CTK

MULTIMETER

TEST STATION

**REFERENCES:**

APPLICABLE TEST PROCEDURES TO

APPLICABLE INTERMEDIATE MAINTENANCE MANUAL

APPLICABLE IPB

**CUES:**

ISOLATED MALFUNCTION

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A ALIGN TEST STATION ADAPTERS ELECTRONICALLY (F 206)

A ALIGN TEST STATION ADAPTERS MECHANICALLY (F 207)

A CLEAN CONTACTS (F 210)

A FUNCTIONALLY CHECK ADAPTER OR TEST STATION

A ORDER PARTS

A REMOVE AND REPLACE CONNECTORS

A REMOVE AND REPLACE DEFECTIVE PINS

A REMOVE AND REPLACE MINOR HARDWARE (TASK NUMBER: 61410)

A REMOVE AND REPLACE PHENOLICS

A REMOVE AND REPLACE TEST STATION ADAPTER COMPONENTS (F 271)

A REPAIR WIRING (TASK NUMBER: 61440)

**SKILLS:**

S INSTALL ADAPTER

S OPERATE TEST STATION

S USE COMMON HANDTOOLS

S USE MULTIMETER TO CHECK CONTINUITY

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 206         |            | 8          | 13         | 19       | 19       | 5.01       |     |
| 451X6B | F 206         |            | 4          | 11         | 20       | 19       | 5.01       |     |
| 451X6  | F 206         |            | 6          | 12         | 19       | 19       | 5.01       |     |
| 451X6A | F 207         |            | 11         | 20         | 24       | 16       | 4.50       |     |
| 451X6B | F 207         |            | 8          | 19         | 19       | 16       | 4.50       |     |
| 451X6  | F 207         |            | 9          | 19         | 22       | 16       | 4.50       |     |
| 451X6A | F 210         |            | 45         | 54         | 62       | 37       | 2.54       |     |
| 451X6B | F 210         |            | 62         | 65         | 62       | 37       | 2.54       |     |
| 451X6  | F 210         |            | 51         | 59         | 62       | 37       | 2.54       |     |
| 451X6A | F 271         |            | 50         | 58         | 62       | 39       | 4.20       |     |
| 451X6B | F 271         |            | 35         | 47         | 47       | 39       | 4.20       |     |
| 451X6  | F 271         |            | 43         | 52         | 55       | 39       | 4.20       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 206 ALIGN TEST STATION ADAPTERS ELECTRONICALLY  
F 207 ALIGN TEST STATION ADAPTERS MECHANICALLY  
F 210 CLEAN CONTACTS  
F 271 REMOVE OR REPLACE TEST STATION ADAPTER COMPONENTS

**TASK NUMBER:** 61510

**TASK STATEMENT:**

RELOCATE AVIONICS EQUIPMENT

**TASK NOTES:**

EACH BASE HAS LOCAL CLASSES IN HAZARDOUS CARGO, CARGO PALLET, BUILD-UP, DEPLOYED EQUIPMENT CUSTODIAN, CHEMICAL WARFARE, FORK LIFT TRAINING, ETC.

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

AIR CONDITIONER  
CTK  
FORK LIFT  
GENERATORS  
PALLET  
STATION JACKS  
TORQUE WRENCH

**REFERENCES:**

AFR 71-4  
LOCAL MOBILITY PLAN

**CONDITIONS:**

ABILITY TO SECURELY MOUNT EQUIPMENT, DRY PROTECTED ENVIRONMENT

**CUES:**

AS DIRECTED BY TECHNICAL DATA; MOBILITY OPERATIONS

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A PLAN LAYOUT OF FACILITIES (A 19)  
A CONFIGURE AVIONICS AND SUPPORT EQUIPMENT FOR OPERATION  
A INSTALL TEST STATIONS IN WORK AREAS (F 223)  
A INSTALL SIMULATORS OR MOCKUPS IN WORK AREAS (F 222)  
A INVENTORY EQUIPMENT  
A INVENTORY HAZARDOUS CARGO  
A PALLETIZE EQUIPMENT  
A PREPARE EQUIPMENT FOR AIR SHIPMENT  
A REPAIR WIRING (TASK NUMBER: 61440)

**SKILLS:**

S CONNECT AIR CONDITIONER  
 S CONNECT GENERATORS  
 S OPERATE FORKLIFT  
 S PERFORM INITIAL ALIGNMENT OF STABILIZED PLATFORMS  
 S SECURE EQUIPMENT ON PALLET  
 S SECURE PLATFORM TO TRUE NORTH  
 S USE COMMON HANDTOOLS  
 S USE STATION JACKS TO MOVE STATION  
 S USE TORQUE WRENCH  
 S VERIFY ALIGNMENT OF RATE TABLES

**KNOWLEDGE:**

K ANNOTATE FORMS  
 K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS  
 K APPLY SHOP SAFETY PROCEDURES  
 K APPLY TECHNICAL DATA  
 K COMPLETE MOBILITY FORM/LISTS  
 K COMPUTE MAGNETIC NORTH  
 K DETERMINE POWER REQUIREMENTS  
 K DETERMINE PROPER LOCATION OF EQUIPMENT OR PALLET  
 K DETERMINE TRUE NORTH  
 K INSPECT GENERATORS  
 K INSPECT PALLET

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | A 019         |            | 0          | 0          | 4        | 16       | 5.73       |     |
| 451X6B | A 019         |            | 0          | 0          | 3        | 16       | 5.73       |     |
| 451X6  | A 019         |            | 0          | 1          | 3        | 16       | 5.73       |     |
| 451X6A | F 215         |            | 3          | 4          | 10       | 19       | 5.20       |     |
| 451X6B | F 215         |            | 15         | 13         | 18       | 19       | 5.20       |     |
| 451X6  | F 215         |            | 8          | 9          | 14       | 19       | 5.20       |     |
| 451X6A | F 222         |            | 5          | 7          | 7        | 12       | 4.33       |     |
| 451X6B | F 222         |            | 27         | 28         | 21       | 12       | 4.33       |     |
| 451X6  | F 222         |            | 14         | 17         | 14       | 12       | 4.33       |     |
| 451X6A | F 223         |            | 18         | 20         | 22       | 25       | 4.37       |     |
| 451X6B | F 223         |            | 19         | 25         | 35       | 25       | 4.37       |     |
| 451X6  | F 223         |            | 18         | 22         | 28       | 25       | 4.37       |     |
| 451X6A | F 253         |            | 13         | 20         | 26       | 21       | 4.89       |     |
| 451X6B | F 253         |            | 27         | 29         | 29       | 21       | 4.89       |     |
| 451X6  | F 253         |            | 18         | 25         | 28       | 21       | 4.89       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

- A 19 PLAN LAYOUT OF FACILITIES
- F 215 CONFIGURE AVIONICS AND SUPPORT EQUIPMENT AT MOBILITY  
OPERATING AREAS
- F 222 INSTALL SIMULATORS OR MOCKUPS IN WORK AREAS
- F 223 INSTALL TEST STATIONS IN WORK AREAS
- F 253 RECONFIGURE AVIONICS AND SUPPORT EQUIPMENT FOR NORMAL  
OPERATION AFTER MOBILITY USE

**TASK NUMBER:** 61520

**TASK STATEMENT:**

CALIBRATE CATEGORY II TEST EQUIPMENT (U 899)

**TASK NOTES:**

TRUs GO TO PMEL

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

ATSCS  
CTK

**REFERENCES:**

33AA43-13-1

**CONDITIONS:**

AIR CONDITIONED ENVIRONMENT

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A CONNECT ATSCS  
A WARM-UP ATSCS (MINIMUM 2 HOURS)  
A PERFORM CALIBRATION

**SKILLS:**

S USE ATSCS  
S USE COMMON HANDTOOLS

**KNOWLEDGE:**

K ANNOTATE FORMS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | U 899         |            | 0          | 0          | 0        | 5        | 5.47       |     |
| 451X6B | U 899         |            | 0          | 6          | 5        | 5        | 5.47       |     |
| 451X6  | U 899         |            | 0          | 3          | 3        | 5        | 5.47       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

U 899 CALIBRATE CATEGORY II TEST EQUIPMENT

**TASK NUMBER:** 61530

**TASK STATEMENT:**

FABRICATE TEST EQUIPMENT, SIMULATORS, OR MOCKUPS (F 218)

**TRAINING RECOMMENDATIONS:**

RECOMMEND: 5-LVL OJT

**EQUIPMENT, TOOLS, SUPPLIES:**

BUILDING SUPPLIES  
CTK  
ESD PROTECTIVE EQUIPMENT  
POWER TOOLS  
SOLDERING STATION

**REFERENCES:**

APPLICABLE SHOP SYSTEMS TO  
APPLICABLE AIRCRAFT SYSTEM TO

**CONDITIONS:**

REQUIRED SHOP STANDARDS

**CUES:**

AS DIRECTED BY TECHNICAL DATA

**STANDARDS:**

IAW REFERENCES

**ACTIVITIES:**

A DEVELOP PLANS  
A BUILD FRAME  
A FABRICATE WIRING, OR CABLES  
A INSTALL SHOP STANDARDS

**SKILLS:**

S ASSEMBLE SOLDERLESS COAXIAL CONNECTORS  
S ASSEMBLE SOLDERLESS CRIMP CONNECTORS  
S ASSEMBLE SOLDERLESS MULTIPIN CONNECTORS  
S CONNECT CABLES  
S SOLDER OR DESOLDER COAXIAL CONNECTORS  
S SOLDER OR DESOLDER MULTIPIN CONNECTORS  
S SOLDER OR DESOLDER PC BOARDS  
S SOLDER OR DESOLDER TERMINAL CONNECTIONS  
S USE BUILDING SUPPLIES TO FABRICATE FRAME  
S USE COMMON HANDTOOLS  
S USE POWER TOOLS

**KNOWLEDGE:**

K APPLY ESD PRECAUTIONS  
K APPLY SHOP SAFETY PROCEDURES  
K APPLY TECHNICAL DATA  
K DETERMINE EXTERNAL EQUIPMENT REQUIRED  
K DETERMINE POWER REQUIREMENTS  
K TRACE SIGNALS THROUGH INTERCONNECTS (TASK NUMBER: 61350)  
K UTILIZE SCHEMATIC DIAGRAMS (TASK NUMBER: 61340)

**RELATED OCCUPATIONAL SURVEY DATA:**

| AFSC   | DUTY/<br>TASK | TNG<br>EMP | 1ST<br>JOB | 1ST<br>ENL | 5<br>LVL | 7<br>LVL | TSK<br>DIF | ATI |
|--------|---------------|------------|------------|------------|----------|----------|------------|-----|
| 451X6A | F 218         |            | 8          | 7          | 10       | 10       | 6.33       |     |
| 451X6B | F 218         |            | 19         | 14         | 14       | 10       | 6.33       |     |
| 451X6  | F 218         |            | 12         | 10         | 12       | 10       | 6.33       |     |

**USAF JOB INVENTORY TASK STATEMENTS:**

F 218 FABRICATE TEST EQUIPMENT, SIMULATORS, OR MOCKUPS

**APPENDIX A**  
**LRU AND EQUIPMENT LIST**

**1. TASK NUMBER: 60010 through 60050 - AUTOMATIC TEST STATIONS**

- a. ATTITUDE and RATE
- b. ELECTRONIC SYSTEMS
- c. INDICATORS and MODULES
- d. INDICATORS and SENSORS
- e. COMPUTER (6803)
- f. CONVERTER and FLIGHT CONTROLS
- g. NAVIGATION and FLIGHT CONTROLS
- h. RADAR ALTIMETER (6836)
- i. VIDEO (6815, 6875, 6885)
- j. RECEIVER-TRANSMITTER-MODULATOR (6802, 6872, 6882)
- k. SERVOS (6895) and INDICATORS (6825)
- l. DIGITAL NAVIGATION and WEAPONS DELIVERY (6863)
- m. DISPLAYS

**2. TASK NUMBER: 60150 through 60220 - AIS/R TEST STATIONS**

- a. COMPUTER
- b. ELECTRONIC WARFARE (EW)
- c. VIDEO
- d. RADIO FREQUENCY (RF)

**3. TASK NUMBER: 60290 through 60310**  
**CORE 1 (ANY AIS/R TEST STATION)**

- a. AUTO PILOT DAMPER PANEL
- b. CENTER AUXILIARY FLIGHT CONTROL PANEL
- c. AUXILIARY FLIGHT CONTROL PANEL
- d. FORWARD AUXILIARY FLIGHT CONTROL PANEL
- e. AUXILIARY FLIGHT CONTROL TEST PANEL
- f. GENERATOR CONTROL PANEL
- g. STALL WARNING RELAY ASSEMBLY
- h. HORIZONTAL SITUATION INDICATOR
- i. ATTITUDE REMOTE STANDBY INDICATOR
- j. AIR SPEED MACH AMPLIFIER
- k. ALTITUDE VERTICAL SPEED
- l. MODE SELECT INSTRUMENT SET
- m. COMPASS SYSTEM CONTROLLER
- n. MAXIMUM SAFE MACH ASSEMBLY
- o. ANTENNA COUPLER CONTROL
- p. INTERCOM SET CONTROL
- q. INTERCOM SET STATION
- r. RECEIVER CONTROL
- s. AMPLIFIER RELAY ASSEMBLY
- t. ELECTRONIC CONTROL AMPLIFIER
- u. TRANSPONDER CONTROL
- v. ANTENNA ASSEMBLY
- w. ANTENNA PEDESTAL
- x. ANTENNA INDICATOR CONTROL

#### **CORE 1 (ANY AIS/R TEST STATION) (continued)**

- y. ANTENNA INDICATOR CONTROL POWER SWITCH ASSEMBLY
- z. LARA MULTIPLEXER UNIT
- aa. RADAR SET CONTROL
- ab. RELAY ASSEMBLY (TFR)
- ac. AMPLIFIER POWER SUPPLY
- ad. POWER SWITCHING ASSEMBLY
- ae. ELECTRICAL EQUIPMENT RACK
- af. BOMB NAVIGATION/TIME INDICATOR
- ag. BATTERY CONTROL POWER SUPPLY
- ah. TERRAIN FOLLOWING COMPUTER
- ai. LOW VOLTAGE POWER SUPPLY
- aj. ANTENNA UNIT
- ak. CURSOR CONTROL INDICATOR
- al. DIGITAL DISPLAY INDICATOR
- am. CONTROL INDICATOR
- an. WEAPON SYSTEM MAINTENANCE CONTROL
- ao. SIGNAL DISTRIBUTION PANEL
- ap. LASER CONTROL PANEL
- aq. PAVE TACK CONTROL PANEL
- ar. DATA LINK POD
- as. LEAD/LAUNCH COMPUTER AMPLIFIER
- at. CONTROL AMPLIFIER POWER SUPPLY
- au. ELECTRONIC COUNTERMEASURES INTERFERENCE BLANKER

#### **CORE 2 (COMPUTER OR VIDEO TEST STATION)**

- a. FEEL AND TRIM ASSEMBLY
- b. PRIMARY AIR DATA COMPUTER
- c. STALL INHIBITOR COMPUTER
- d. ANTENNA CONTROL UNIT
- e. COMPUTER CONTROL UNIT
- f. NAVIGATION DISPLAY UNIT
- g. ANTENNA CONTROL
- h. ANTENNA
- i. ANTENNA PEDESTAL
- j. ELECTRONIC EQUIPMENT RACK

#### **COMPUTER TEST STATION**

- a. ATTITUDE INDICATOR
- b. DISPLACEMENT GYRO
- c. ELECTRONIC CONTROL AMPLIFIER
- d. PHASE MONITOR
- e. FLIGHT CONTROL ROLL COMPUTER
- f. RATE GYROSCOPE ASSEMBLY
- g. FLIGHT CONTROL PITCH COMPUTER
- h. NORMAL LINEAR ACCELEROMETER ASSEMBLY
- i. FLIGHT CONTROL YAW COMPUTER
- j. LATERAL LINEAR ACCELEROMETER ASSEMBLY
- k. STABILIZATION PLATFORM
- l. NAVIGATIONAL COMPUTER
- m. BURST UNIT PANEL

## **COMPUTER TEST STATION (continued)**

- n. BALLISTIC COMPUTER
- o. NAVSET MUX CONVERTER
- r. COMPUTER CONTROL
- s. LEAD COMPUTING GYRO ASSEMBLY
- t. INERTIAL BATTERY UNIT

## **RF TEST STATION**

- a. ANTENNA COUPLER
- b. LOCALIZER RECEIVER
- c. GLIDE SLOPE/MARKER BEACON
- d. ANTENNA ASSEMBLY
- e. RECEIVER-TRANSMITTER
- f. SYNCHRONIZER-TRANSMITTER
- g. RECEIVER-TRANSMITTER-MODULE
- h. ANTENNA RECEIVER
- i. SYNCHRONIZER-TRANSMITTER
- j. ELECTRONIC PROCESSOR
- k. TRANSMITTER
- l. RADAR RECEIVER
- m. REFERENCE SIGNAL GENERATOR
- n. RADAR ELECTRONIC UNIT

## **EW TEST STATION**

- a. CONTROL INDICATOR
- b. INDICATOR PANEL-MARK I
- c. INDICATOR PANEL-MARK II
- d. AFT RADAR RECEIVER
- e. FORWARD RADAR RECEIVER
- f. INDICATOR CONTROL
- g. ELECTRIC EQUIPMENT RACK
- h. RF AMPLIFIER (LOW-BAND)
- i. COUNTERMEASURES RECEIVER (LOW-BAND)
- k. RF AMPLIFIER (MID-BAND)
- l. COUNTERMEASURES RECEIVER (MID-BAND)
- m. RF AMPLIFIER
- n. COUNTERMEASURES RECEIVER (HIGH-BAND)
- o. VIDEO SIGNAL PROCESSOR
- p. COUNTERMEASURES SET CONTROLLER
- q. MULTI-CHANNEL RECEIVER
- r. DUAL CHANNEL RECEIVER
- s. DIGITAL PROCESSOR
- t. ANTENNA SWITCHING UNIT
- u. INDICATOR CONTROL

## **VIDEO TEST STATION**

- a. INDICATOR RECORDER
- b. SYNCHRONIZER
- c. TFR INDICATOR
- d. INDICATOR RECORDER

## **VIDEO TEST STATION (continued)**

- e. SYNCHRONIZER
- f. TERRAIN FOLLOWING COMPUTER
- g. TERRAIN FOLLOWING INDICATOR
- h. LOW ALTITUDE MONITOR
- i. SIGNAL DATA CONVERTER
- j. LEFT HAND OPTICAL DISPLAY SIGHT
- k. RIGHT HAND OPTICAL DISPLAY SIGHT
- l. RADAR DATA CONVERTER
- m. DIGITAL DATA INDICATOR
- n. ANALOG DISPLAY INDICATOR
- o. OPTICAL DISPLAY SIGHT
- p. ECM INTERFERENCE BLANKER

### **TASK NUMBER: 60320 through 60340 - RF TYPE LRUs**

- a. TRANSMITTER
- b. ELECTRONIC PROCESSING UNIT
- c. TFR ANTENNA RECEIVER
- d. MICROWAVE RECEIVER UNIT
- e. MASTER FREQUENCY GENERATOR
- f. F-111D ATTACK RADAR SYSTEM ANTENNA
- g. LOW ALTITUDE RADAR ALTIMETER RECEIVER/TRANSMITTER
- h. MODULATOR-RECEIVER-TRANSMITTER
- i. TFR TRANSMITTER-SYNCHRONIZER
- j. RADAR RECEIVER TRANSMITTER
- k. DOPPLER ELECTRICAL UNIT
- l. DOPPLER ANTENNA UNIT

### **TASK NUMBER: 60350 through 60370 - DIGITAL TYPE LRUs**

- a. ARS ELECTRICAL SYNCHRONIZER
- b. FEEL AND TRIM ASSEMBLY
- c. TERRAIN FOLLOWING COMPUTER
- d. DIGITAL DOPPLER PROCESSING UNIT (DDPU)
- e. ATTACK RADAR SYSTEM ANTENNA
- f. GENERAL PURPOSE COMPUTER
- g. F-111D TERRAIN FOLLOWING AMPLIFIER POWER SUPPLY
- h. FLIGHT DIRECTOR COMPUTER
- i. INTERFERENCE BLANKER
- j. MAINTENANCE CONTROL UNIT
- k. SIGNAL DATA CONVERTER
- l. STALL INHIBITOR SYSTEM COMPUTER
- m. NAVIGATION COMPUTER UNIT
- n. BALLISTIC COMPUTER UNIT
- o. FLIGHT CONTROL COMPUTERS (ROLL, PITCH, YAW)
- p. NAVIGATION DISPLAY UNIT
- q. RADAR INDICATOR
- r. WEAPONS NAVIGATION COMPUTER/MISSION COMPUTER
- s. HORIZONTAL SITUATION DISPLAY PROCESSOR

**6. TASK NUMBER: 60380 through 60400 - ANALOG TYPE LRUs**

- a. TERRAIN FOLLOWING AMPLIFIER POWER SUPPLY
- b. NAVIGATION COMPUTER UNIT
- c. VELOCITY METER
- d. INERTIAL REFERENCE UNIT
- e. STABILIZED PLATFORM UNIT
- f. DISPLACEMENT GYROSCOPE
- g. RATE GYROSCOPE
- h. LATERAL ACCELEROMETER
- i. LINEAR ACCELEROMETER
- j. NORMAL ACCELEROMETER

**7. TASK NUMBER: 60410 through 60430 - DISPLAY TYPE LRUs**

- a. HEAD UP DISPLAY
- b. LEAD COMPUTING OPTICAL SIGHT SYSTEM OPTICAL DISPLAY SIGHT
- c. VIRTUAL IMAGE DISPLAY
- d. MULTISENSOR DISPLAY
- e. RADAR DISPLAY CONTROL
- f. VIDEO SIGNAL DISPLAY
- g. HORIZONTAL SITUATION DISPLAY INDICATOR
- h. INDICATOR RECORDER
- i. TERRAIN FOLLOWING INDICATOR

**8. TASK NUMBER: 60440 through 60460 - MISCELLANEOUS TYPE LRUs**

- a. AUXILIARY FLIGHT REFERENCE SYSTEM ELECTRONIC CONTROL AMPLIFIER
- b. COUNTERMEASURES DISPENSING SYSTEM CONTROLS
- c. ATTACK RADAR SYSTEM RADAR SET CONTROL BOX
- d. INSTRUMENT SET COUPLER
- e. INTERFERENCE BLANKER POWER SUPPLIES
- f. LEAD COMPUTING OPTICAL SIGHT SYSTEM AMPLIFIER
- g. TERRAIN FOLLOWING RADAR AMPLIFIER POWER SUPPLY
- h. F-111D ATTACK RADAR SYSTEM LOW VOLTAGE POWER SUPPLY
- i. AIRSPEED MACH INDICATOR ELECTRONIC CONTROL AMPLIFIER
- j. ALTITUDE VERTICAL VELOCITY INDICATOR ELECTRONIC CONTROL AMPLIFIER
- k. AUTOPILOT DAMPER PANELS
- l. COMPUTER CONTROL UNIT
- m. INERTIAL BATTERY UNITS
- n. LOW ALTITUDE MONITOR
- o. TERRAIN FOLLOWING RADAR SET CONTROL
- p. ATTACK RADAR SYSTEM ANTENNA CONTROL UNIT
- q. ATTACK RADAR SYSTEM ANTENNA INDICATOR CONTROL
- r. ATTITUDE DIRECTOR INDICATOR
- s. BEARING DISTANCE HEADING INDICATOR
- t. HORIZONTAL DISPLAY INDICATOR
- u. NAVIGATION DATA DISPLAY CONTROL (D MODEL)
- v. AIRSPEED MACH INDICATOR
- w. ALTITUDE VERTICAL VELOCITY INDICATOR
- x. HORIZONTAL SITUATION INDICATOR

**9. TASK NUMBER: 60520 through 60540 - CADC STATION LRUs**

- a. CENTRAL AIR DATA COMPUTER
- b. MAXIMUM SAFE MACH ASSEMBLY
- c. SUBSYSTEM TIE-IN TEST SET
- d. TERRAIN FOLLOWING RADAR TEST SET
- e. ICE DETECTOR
- f. PRESSURE SENSOR INDICATOR
- g. ENGINE PRESSURE RATIO TRANSMITTER
- h. STANDBY ALTIMETER
- i. STANDBY VERTICAL VELOCITY INDICATOR

**10. TASK NUMBER: 60560 through 60580 - APX-64 IFF LRUs**

- a. RECEIVER-TRANSMITTER
- b. RADIO SET CONTROL
- c. TRANSPONDER TEST SET
- d. SELF-TEST BOX

**11. TASK NUMBER: 60590 - MODE IV COMPUTERS**

- a. KIT
- b. KIR

**12. TASK NUMBER: 606000 - APX-64 IFF TEST SETS**

- a. APM-239A
- b. APM-245
- c. UPM-137
- d. UPM-137A

**13. TASK NUMBER: 60620 through 60640 - ARC-164 IFF LRUs**

- a. RECEIVER-TRANSMITTER
- b. FREQUENCY INDICATOR
- c. BLADE ANTENNA
- d. TEST ADAPTER
- e. RADAR SET CONTROL

**14. TASK NUMBER: 60650 - ARC-164 TEST SET**

- a. ARM-173
- b. ARM-164

**15. TASK NUMBER: 60670 through 60690 - ARC-190 LRUs**

- a. RADIO SET CONTROL
- b. RADIO SET CONTROL MOUNTS
- c. ANTENNA COUPLER
- d. RECEIVER-TRANSMITTER

**16. TASK NUMBER: 60700 - ARC-190 TEST SETS**

- a. ANTENNA SIMULATOR TEST SET
- b. HF TEST SET
- c. COUPLER TEST SET

**17. TASK NUMBER: 60710 through 60730 - ILS LRUs**

- a. GLIDE SLOPE MARKER BEACON RECEIVER
- b. LOCALIZER RECEIVER

**18. TASK NUMBER: 60740 through 60760 - ARN-118 LRUs**

- a. RECEIVER-TRANSMITTER
- b. RADIO SET CONTROL
- c. CONVERTER-ADAPTER
- d. ELECTRICAL EQUIPMENT MOUNTING BASE

**19. TASK NUMBER: 60770 - TACAN TEST SETS**

- a. 972V-1
- b. APM-135
- c. APM-135A

**20. TASK NUMBER: 60780 - APX-78 LRUs**

- a. RECEIVER-TRANSMITTER
- b. RADIO SET CONTROL

**21. TASK NUMBER: 60790 through 60810 - AN/ALR-62 TEST STATIONS**

- a. COUNTERMEASURES RECEIVER SET
- b. DIGITAL PROCESSOR TEST SET

**22. TASK NUMBER: 60880 through 60900 - PEN AIDS LRUs**

- a. LOW BAND POWER AMPLIFIERS
- b. LOW BAND POWER RECEIVER
- c. MID BAND POWER AMPLIFIERS
- d. MID BAND POWER RECEIVER
- e. HIGH BAND POWER AMPLIFIERS
- f. HIGH BAND POWER RECEIVER

**23. TASK NUMBER: 60910 through 60930 - CRS LRUs**

- a. AFT RADAR RECEIVER
- b. AFT FORWARD RADAR RECEIVER
- c. ANTENNA SWITCHING UNITS
- d. DUAL CHANNEL RECEIVER
- e. MULTICHANNEL RECEIVER

**24. TASK NUMBER: 60940 through 60960 - DPTS LRUs**

- a. CONTROL INDICATORS
- b. DIGITAL PROCESSORS
- c. INDICATOR PANEL

**25. TASK NUMBER: 61130 through 61150 - AN/ALM-204 LRUs**

- a. RADAR INFRARED INDICATOR
- b. DIGITAL DISPLAY INDICATOR
- c. DIGITAL DISPLAY INDICATOR CONTROL
- d. CONVERTER SYNCHRONIZER
- e. COMPUTER INTERFACE ADAPTER
- f. BAND 1 RECEIVER
- g. BAND 2 RECEIVER
- h. BAND 4 RECEIVER
- i. BAND 5/6 RECEIVER
- j. BAND 7 RECEIVER
- k. BAND 8/9A RECEIVER
- l. BAND 8/9B RECEIVER
- m. BAND 8/9 RECEIVER
- n. ENCODER
- o. AFT POWER SUPPLY
- p. COMPUTER
- q. BAND 1 TRANSMITTER
- r. BAND 2 TRANSMITTER
- s. BAND 4 TRANSMITTER
- t. BAND 5/6 TRANSMITTER
- u. BAND 7 TRANSMITTER
- v. BAND 8 TRANSMITTER
- w. BAND 9 TRANSMITTER
- x. MID BAND EXCITER
- y. SIGNAL DATA CONVERTER

**26. TASK NUMBER: 61200 through 61220 - GACT LRUs**

- a. AIR CONDITIONING CONTROL PANEL
- b. THERMAL TRANSPORT TEST
- c. THERMAL TRANSPORT RELAY
- d. MAINLINE CONTACTOR
- e. JAMMING SUB-SYSTEM POWER RELAY ASSEMBLY
- f. GENERATOR CONTROL PANEL
- g. LIGHTING CONTROL PANEL
- h. DIM AND TEST
- i. CAUTION INDICATOR
- j. AUXILIARY CAUTION INDICATOR
- k. DISPOSABLES CONTROL PANEL
- l. TRASIENT SUPPLY NETWORK
- m. JAMMER STATUS PANEL
- n. MODE SELECT PANEL
- o. RECEIVER CONTROL PANEL
- p. JAMMING SUB-SYSTEM CAUTION PANEL
- q. RF CALIBRATOR
- r. JAMMER CONTROL PANEL

**27. TASK NUMBER: 61260 through 61280 - AN/ALQ-131 POD TEST SETS**

- a. AN/ALM-186
- b. AN/ALM-187
- c. AN/ALM-192
- d. AN/ALM-188

**28. TASK NUMBER: 61420 through 61430**

- a. ATTACK RADAR SYSTEM ANTENNA PEDESTAL
- b. ATTACK RADAR SYSTEM RACK
- c. DIGITAL COMPUTER COMPLEX RACK
- d. ATTACK RADAR SYSTEM ROLL PEDESTAL
- e. LOW ALTITUDE RADAR ALTIMETER RACK
- f. TERRAIN FOLLOWING RADAR RACK
- g. RACK

# **APPENDIX B** **ACRONYM LIST**

| <b>ACRONYM</b> | <b>DEFINITION</b>                       |
|----------------|---|
| A/D            | ANALOG TO DIGITAL                       |
| AAI            | AIR-TO-AIR INTERROGATOR                 |
| AC             | ALTERNATION CURRENT                     |
| ACU            | ANTENNA CONTROL UNIT                    |
| ADI            | ATTITUDE DIRECTOR INDICATOR             |
| AFRS           | AUXILIARY FLIGHT REFERENCE SYSTEM       |
| AIC            | ANTENNA INDICATOR CONTROL               |
| AIS/R          | AVIONIC INTERMEDIATE/SHOP REPLACEMENT   |
| AM             | AMPLITUDE MODULATION                    |
| AMC            | ADVANCED MICROELECTRONIC CONVERTER      |
| AMI            | AIRSPEED MACH INDICATOR                 |
| AMP            | AMPLIFIER                               |
| AMP/DET        | AMPLIFIER/DETECTOR                      |
| APDP           | AUTOPILOT DAMPER PANEL                  |
| API            | ANGLE POSITION INDICATOR                |
| ARS            | ATTACK RADAR SYSTEM                     |
| ASU            | ANTENNA SELECTOR UNIT                   |
| ATE            | AUTOMATIC TEST EQUIPMENT                |
| ATSCS          | AVIONICS TEST SET CALIBRATOR SET        |
| AVVI           | ALTITUDE VERTICAL VELOCITY INDICATOR    |
| BCU            | BALLISTIC COMPUTER UNIT                 |
| BDHI           | BEARING DISTANCE HEADING INDICATOR      |
| BIT            | BUILT-IN TEST                           |
| CADC           | CENTRAL AIR DATA COMPUTER               |
| CAMS           | CORE AUTOMATED MAINTENANCE SYSTEM       |
| CCA            | CIRCUIT CAD ASSEMBLIES                  |
| CDU            | CONTROL DISPLAY UNIT                    |
| CENPAC         | CENTRAL PROCESSOR AND CONTROLLER        |
| CETP           | COMPUTER EXERCISE TEST PANEL            |
| CI             | CONTROL INDICATOR                       |
| CIIL           | CONTROL INTERFACE INTERMEDIATE LANGUAGE |
| CIU            | CONTROL INTERFACE UNIT                  |
| CMDS           | COUNTERMEASURES DISPENSING SYSTEM       |
| CMOS           | COMPLEMENTARY METAL OXIDE SEMICONDUCTOR |
| CP             | CONTROL PANEL                           |
| CPIN           | COMPUTER PROGRAM IDENTIFICATION NUMBER  |
| CRS            | COUNTERMEASURE RECEIVER SET             |
| CRT            | CATHODE-RAY TUBE                        |
| CTK            | CONSOLIDATED TOOL KIT                   |
| CW             | CONTINUOUS WAVE                         |
| D/A            | DIGITAL TO ANALOG                       |
| DAC            | DIGITAL ANALOG CONVERSION               |
| DATAAC         | BINARY DATA REGISTER-ROUTER             |
| DAU            | DOPPLER ANTENNA UNIT                    |
| DB             | DEBICEL                                 |
| DC             | DIRECT CURRENT                          |
| DCC            | DIGITAL COMPUTER COMPLEX                |
| DCR            | DUAL CHANNEL RECEIVER                   |
| DDI            | DIGITAL DISPLAY INDICATOR               |
| DDPU           | DIGITAL DOPPLER PROCESSING UNIT         |

| ACRONYM | DEFINITION                                       |
|---------|--|
| DET     | DETECTOR   |
| DEU     | DOPPLER ELECTRICAL UNIT                          |
| DIP     | DUAL IN-LINE PROCESSOR                           |
| DMM     | DIGITAL MULTIMETER                               |
| DP      | DIGITAL PROCESSOR                                |
| DPTS    | DIGITAL PROCESSOR TEST STATION                   |
| DTS     | DYNAMIC TEST SET                                 |
| DVM     | DIGITAL VOLTMETER                                |
| ECA     | ELECTRONIC CONTROL AMPLIFIER                     |
| ECM     | ELECTRONIC COUNTERMEASURE                        |
| EPU     | ELECTRONICS PROCESSOR UNITS                      |
| ESD     | ELECTROSTATIC SENSITIVE DEVICE                   |
| ESS     | ELECTRICAL STANDARD SET                          |
| EW      | ELECTRONIC WARFARE                               |
| FDC     | FLIGHT DIRECTOR COMPUTER                         |
| FDR     | FLIGHT DATA RECORDER                             |
| FM      | FREQUENCY MODULATION                             |
| FRTS    | FREQUENCY RESPONSE TEST SET                      |
| GACT    | GRUMMAN AUTOMATIC CABLE TESTER                   |
| GATS    | GRUMMAN AUTOMATIC TEST SET                       |
| GSU     | GIMBAL SUPPORT UNIT                              |
| HBPA    | HIGH BAND POWER AMPLIFIER                        |
| HBR     | HIGH BAND RECEIVER                               |
| HDI     | HORIZONTAL DISPLAY INDICATOR                     |
| HF      | HIGH FREQUENCY                                   |
| HFPA    | HIGH FREQUENCY POWER AMPLIFIER                   |
| HPMA    | HIGH POWER MICROWAVE ASSEMBLY                    |
| HPRFC   | HIGH POWER RADIO FREQUENCY CONSOLE               |
| HSDI    | HORIZONTAL SITUATION DISPLAY INDICATOR           |
| HSDP    | HORIZONTAL SITUATION DISPLAY PROCESSOR           |
| HSI     | HORIZONTAL SITUATION INDICATOR                   |
| HUD     | HEAD UP DISPLAY                                  |
| HVL     | HIGH VOLTAGE LOAD                                |
| HVPS    | HIGH VOLTAGE POWER SUPPLY                        |
| I/O     | INPUT/OUTPUT                                     |
| IBNS    | INERTIAL BOMB NAVIGATION SYSTEM                  |
| IC      | INTEGRATED CIRCUIT                               |
| ID      | INTERFACE DEVICE                                 |
| IDA     | INTERFACE DEVICE ADAPTER                         |
| IEEE    | INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS |
| IF      | INTERMEDIATE FREQUENCY                           |
| IFF     | IDENTIFICATION FRIEND OR FOE                     |
| ILS     | INSTRUMENT LANDING SYSTEM                        |
| INS     | INERTIAL NAVIGATION SYSTEM                       |
| IP      | INDICATOR PANEL                                  |
| IPB     | ILLUSTRATED PARTS BREAKDOWN                      |
| IREP    | INTERMEDIATE REPAIR ENHANCEMENT PROGRAM          |
| IRU     | INERTIAL REFERENCE UNIT                          |
| ISC     | INSTRUMENT SET COUPLERS                          |
| ITA     | INTERFACE TEST ADAPTER                           |
| ITS     | INERTIAL TEST SET                                |
| JFET    | JUNCTION FIELD EFFECT TRANSISTOR                 |
| JSS     | JAMMING SUB-SYSTEM                               |

**ACRONYM****DEFINITION**

|          |   |
|----------|---|
| LAM      | LOW ALTITUDE MONITOR                              |
| LARA     | LOW ALTITUDE RADAR ALTIMETER                      |
| LBPA     | LOW BAND POWER AMPLIFIER                          |
| LBR      | LOW BAND RECEIVER                                 |
| LCD      | LIQUID CRYSTAL DIODE                              |
| LCOS     | LEAD COMPUTING OPTICAL SIGHT                      |
| LCU      | LIQUID COOLING UNIT                               |
| LED      | LIGHT EMITTING DIODE                              |
| LRU      | LINE REPLACEABLE UNIT                             |
| LVPS     | LOW VOLTAGE POWER SUPPLY                          |
| MBPA     | MID-BAND POWER AMPLIFIER                          |
| MBR      | MID-BAND RECEIVER                                 |
| MC       | MISSION COMPUTER                                  |
| MCC      | MISSION COMPUTER COMPLEX                          |
| MCR      | MULTICHANNEL RECEIVER                             |
| MCU      | MAINTENANCE CONTROL UNIT                          |
| MDC      | MAINTENANCE DATA COLLECTION                       |
| MDL      | MISSION DATA LOADER                               |
| MDT      | MISSION DATA TERMINAL                             |
| MFG      | MASTER FREQUENCY GENERATOR                        |
| MLV      | MEMORY LOADER/VERIFIER                            |
| MMS      | MULTIPLE MATRIX SWITCHES                          |
| MODEM    | MODULATOR AND DEMODULATOR                         |
| MOSFET   | METAL OXIDE SEMICONDUCTOR FIELD EFFECT TRANSISTOR |
| MRT      | MODULATOR RECEIVER-TRANSMITTER                    |
| MRU      | MICROWAVE RECEIVER UNIT                           |
| MSD      | MULTISENSOR DISPLAY                               |
| MSMA     | MAXIMUM SAFE MACH ASSEMBLY                        |
| MTU      | MAGNETIC TAPE UNIT                                |
| NCU      | NAVIGATION COMPUTER UNIT                          |
| NDDP     | NAVIGATION DATA DISPLAY PANELS                    |
| NDI      | NONDESTRUCTIVE INSPECTION                         |
| NDU      | NAVIGATION DISPLAY UNIT                           |
| OA/FI    | OPERATIONAL ASSURANCE/FAULT ISOLATION             |
| ODS      | OPTICAL DISPLAY SIGHT                             |
| OPS      | OPERATION   |
| PATEC    | PORTABLE AUTOMATIC TEST EQUIPMENT CALIBRATOR      |
| PC       | PRINTED CIRCUIT                                   |
| PCLC     | POD COLDPLATE LIQUID COOLER                       |
| PCM      | POWER CONTROL MONITOR                             |
| PE       | PHASED INSPECTION                                 |
| PEN AIDS | PENETRATION AIDS                                  |
| PI       | PERIODIC INSPECTION                               |
| PMI      | PHASED MAINTENANCE INSPECTION                     |
| PPG      | PROGRAMMABLE PULSE GENERATOR                      |
| PROM     | PROGRAMMABLE READ ONLY MEMORY                     |
| PS       | POWER SUPPLY                                      |
| PSVM     | PHASE SENSITIVE VOLTMETER                         |
| R/T      | RECEIVE/TRANSMITTER                               |
| RCL      | RESISTIVE/CAPACITIVE/INDUCTIVE                    |
| RDC      | RADAR DISPLAY CONTROL                             |
| RF       | RADIO FREQUENCY                                   |
| RI       | RADAR INDICATOR                                   |

| ACRONYM | DEFINITION                           |
|---------|--------------------------------------|
| RMS     | RADAR MODULATION SIMULATOR           |
| RRT     | RADAR RECEIVER-TRANSMITTER           |
| RSC     | RADAR SET CONTROL                    |
| RT      | RECEIVER-TRANSMITTER                 |
| SASE    | SEMI-AUTOMATIC SUPPORT EQUIPMENT     |
| SCA     | SILICON CONTROLLED AMPLIFIER         |
| SCR     | SILICON CONTROLLED RECTIFIER         |
| SDC     | SIGNAL DATA CONVERTER                |
| SEL     | SYSTEM ENGINEERING LABORATORY        |
| SIA     | SWITCHING INTERFACE ASSEMBLY         |
| SIS     | STALL INHIBITOR SYSTEM               |
| SPU     | STABILIZED PLATFORM UNIT             |
| SRU     | SHOP REPLACEABLE UNIT                |
| SST     | SUB-SYSTEM TESTER                    |
| SWR     | STANDING WAVE RATIO                  |
| T AND I | TEST AND INSPECTION                  |
| TACAN   | TACTICAL AIR NAVIGATION              |
| TASU    | TEST ADAPTER SWITCHING UNIT          |
| TCTO    | TIME COMPLIANCE TECHNICAL ORDER      |
| TDR     | TIME DOMAIN REFLECTOMETER            |
| TF      | TERRAIN FOLLOWING                    |
| TF AMP  | TERRAIN FOLLOWING AMPLIFIER          |
| TFR     | TERRAIN FOLLOWING RADAR              |
| TO      | TECHNICAL ORDER                      |
| TRU     | TESTER REPLACEABLE UNIT              |
| TSLVC   | TEST SET LOADER/VERIFIER COMPUTER    |
| TTL     | TRANSISTOR TRANSISTOR LOGIC          |
| TWT     | TRAVELING WAVE TUBE                  |
| UHF     | ULTRA HIGH FREQUENCY                 |
| UJT     | UNI-JUNCTION TRANSISTOR              |
| UUT     | UNIT UNDER TEST                      |
| VCO     | VOLTAGE CONTROLLED OSCILLATOR        |
| VD      | VOLTAGE DETECTOR                     |
| VDVC    | VARIABLE DIELECTRIC VACUUM CAPACITOR |
| VID     | VIRTUAL IMAGE DISPLAY                |
| VSD     | VIDEO SIGNALS DISPLAY                |
| WNC     | WEAPONS NAVIGATION COMPUTER          |

**APPENDIX C**  
**LIST OF COMMON HANDTOOLS**

1. **WRENCHES**
  - OPEN END
  - BOX END
  - CRESCENT
  - ALLEN
2. **SOCKET SET**
  - 1/4" DRIVE
  - 3/8" DRIVE
3. **SCREWDRIVERS**
  - COMMON
  - PHILLIPS
  - JEWELERS
4. **PLIERS**
  - NEEDLE NOSE
  - SLIP JOINT
  - DIAGONAL CUT
  - CANNON PLUG
  - WISE GRIP
5. **HAMMER**
6. **NUT DRIVERS**
7. **FLASHLIGHT**
8. **RULER**
9. **FILE SET**
10. **INSPECTION MIRROR**

**APPENDIX D**  
**LIST OF FORMS USED IN AFSC 451X6**

**AF FORMS**

1. AF Form 127 - Traffic Transfer Receipt
2. AF Form 145 - Certificate of Destruction of Material
3. AF Form 198 - Report of Survey for Air Force Property
4. AF Form 264 - MMICS Job/Status Document
5. AF Form 332 - BCE Work Request
6. AF Form 457 - USAF Hazard Report
7. AF Form 601 - Equipment Action Request
8. AF Form 979 - DANGER TAG
9. AF Form 1118 - Notice of Hazard
10. AF Form 1297 - Temporary Issue Receipt
11. AF Form 1530 - Punch Card Transcript
12. AF Form 1996 - Adjusted Stock Level
13. AF Form 2005 - Issue/Turn In Request
14. AF Form 2405 - Personnel Availability Forecast
15. AF Form 2406 - Maintenance Preplan
16. AF Form 2413 - Supply Control Log
17. AF Form 2414 - Verification Worksheet
18. AF Form 2419 - Routing and Review of Quality Control Reports
19. AF Form 2420 - Quality Control Inspection Summary
20. AF Form 2421 - Equipment Discrepancies
21. AF Form 2426 - Training Request and Completion Notification
22. AF Form 2520 - Repair Cycle Control Log

**AFTO FORMS**

1. AFTO Form 20 - Caution and Inspection Record
2. AFTO Form 95 - Significant Historical Data
3. AFTO Form 99 - Limited/Special TMDE Certification
4. AFTO Form 108 - TMDE Certification
5. AFTO Form 163 - Request for Limited/Special Calibration (TMDE)
6. AFTO Form 244 and 245 - Industrial/Support Equipment Record
7. AFTO Form 349 - Maintenance Data Collection Record
8. AFTO Form 349-3 - Maintenance Data Collection Record  
(Automated)
9. AFTO Form 350 - Reparable Item Processing Tag

**DD FORMS**

1. DD Form 362 - Statement of Charges for Government Property,  
Lost, Damaged or Destroyed
2. DD Form 1149 - Requisition and Invoice/Shipping Document
3. DD Form 1348-1 - DOD Single Line Item Release/Receipt Document
4. DD Form 1348-6 - DOD Single Line Item Requisition System  
Document
5. DD Form 1387 - Military Shipment Label
6. DD Form 1387-2 - Special Handling Data/Certification
7. DD Form 1574 - Serviceable Tag - (Materiel)

## **SF FORMS**

1. SF Form 700 - Security Container Information
2. SF Form 701 - Activity Security Checklist
3. SF Form 702 - Security Container Check Sheet